DOCUMENT RESUME

ED 250 852 EC 170 887

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TITLE Special Needs Education Material for Vocational and Industrial Education: Classroom Teachers' Handbook and Bibliography.
INSTITUTION Montana State Office of Public Instruction, Helena. Dept. of Vocational Education Services.
PUB DATE 81
NOTE 279p.; Developed as a resource guide for assisting the physically handicapped; an identification and development of apparatus for laboratory shops. Bibliography, listed on cover page as Volume II, is an update which includes Volume I information.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052) -- Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC12 Plus Postage.
DESCRIPTORS *Disabilities; Federal Legislation; *Mainstreaming; *Teacher Attitudes; Teacher Role; Teaching Methods; *Vocational Education

ABSTRACT

Intended to help accommodate special needs learners in the vocational classroom setting, the handbook presents information on mainstreaming. Chapter I focuses on legal requirements and teacher roles in serving special needs students in the vocational classroom. Chapter II provides a historical overview of special education legislation and reviews recent federal statutes (1973 Rehabilitation Act and Section 504; P.L. 94-142, The Education for All Handicapped Children Act; and P.L. 94-482, the Education Amendment of 1976). Characteristics of eight handicapping conditions are discussed in chapter III. Teachers' attitudes toward mainstreaming handicapped students and the effects of expectation are considered in chapter IV, while chapter V pursues the actual mainstream placement and decision making aspects. Instructional components, such as task analysis and goals and objectives, are addressed in chapter VI. The final chapter offers a planning model for educating the handicapped. An accompanying bibliography contains approximately 1,000 references (from 1973-1981) on such topics concerning mainstreaming as physical handicaps, mental disorders, adaptive processes, and attitudes. (CL)

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SPECIAL-NEEDS EDUCATION MATERIAL

FOR VOCATIONAL AND INDUSTRIAL EDUCATION

A CLASSROOM TEACHER'S HANDBOOK

Developed as a Resource Guide for

ASSISTING THE PHYSICALLY HANDICAPPED:
AN IDENTIFICATION AND DEVELOPMENT
OF APPARATUS FOR LABORATORY SHOPS

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1981

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The findings in this report are the results of a research project sponsored by federal funds administered by the Office of Public Instruction of Montana. Grantees undertaking such projects are encouraged to express freely their professional judgement. Statements in the report do not, therefore, represent official OPI position or policy.

ACKNOWLEDGEMENTS

I greatly appreciate the support given to the continuing vocational special-needs project:

Assisting the Physically Handicapped:
An Identification and Development
Of Apparatus for Laboratory Shops

By the Office of Public Instruction of the State of Montana, Helena, and, in particular, to the Vocational Special-Needs Department of this office. Support by this agency has made this effort possible.

Additional thanks are given to the Department of Agricultural and Industrial Education, Montana State University, and, in particular, to Dr. Max Amberson, Chairman, for continued supportive service and encouragement. Thanks are also extended to Susan Pollington whose expertise as a library resource specialist and copy editor has aided considerably in the presentation of this material.

Kenneth L. Bruwelheide, Ed.D., 1981

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INTRODUCTION

HOW TO USE THIS INFORMATION

The information compiled and presented in this document was developed for those education personnel who desire to properly accommodate the special-needs learner in the vocational classroom setting. Since federal mandates and accompanying state plans have placed the burden of educating the handicapped, or special-needs, student on the local school districts, a great deal of confusion has arisen.

It is the intent of this publication to provide information to local school district administrators, teachers, parents, special education personnel and supporting consultants that will assist them in planning for and integrating, or mainstreaming, the handicapped student into the regular classroom setting. Emphasized throughout this publication will be the concept of appropriate placement of special-needs individuals into the regular school classroom.

As stated in other sections of this work, handicapped students are to be placed into the regular classroom setting only when it has been deemed appropriate by the local school districts, Individualized Education Program (IEP) development teams, and their subsequent evaluation processes. Recognition is also given to the fact that providing special services for the handicapped student is time-consuming and more expensive than nonhandicapped student education.

The purpose of this information is to provide a simplified explanation of what federal mandates have proclaimed will be done for the handicapped student. Even though this document was prepared

with vocational education disciplines in mind, the information is also suitable for use in any academic area. This document is an overview intended as an information guide devoted to clearing up many of the misunderstandings about what is required and by whom in the mainstreaming process. Attention will also be given to describing just who the special-needs individual is and what general handicapping characteristics are.

This handbook, while containing a great deal of information concerning special-needs students and their educational processes, should not be considered a complete or totally definitive guide. The intent is to serve as an introductory guide and/or supplement to those local educational personnel who are involved in the special-needs planning process.

Glossary of Special-Needs Terms

Legislation, textbooks, and other written material on the subject of mainstreaming are filled with technical terms and jargon that may be confusing. The following list of terms is presented in an attempt to clarify many of those terms and jargon. Credit for this glossary of terms must be given to Gary Meers, author of the Handbook of Special Vocational Needs Education, Aspen Systems, 1980. The following terms have been selected for this publication and do not reflect the entire listing of technical terms related to special-needs education.

Glossary of Commonly Used Special-Needs Terms

Taken from: Meers, G Handbook of special vocational needs education. Rockville, Md.: Aspen Systems, 1980, pp. 341-358.

Academic Aptitude: The combination of native and acquired abilities that is needed for school work; likelihood of success in mastering academic work, as estimated from measures of the necessary abilities. (Also called scholastic aptitude.)

Adaptive Behavior: That behavior that is considered appropriate for a given individual in a specific context. This term usually refers to behavior that is judged acceptable by authorities, such as teachers, and not in need of modification. These authorities are guided by developmental and societal norms in making such judgments.

Adjustment: The relation between the individual, his inner self and his environment.

Advisory Committee: A group of persons, usually outside the educational profession, selected for the purpose of offering advice and counsel to the school regarding the vocational program. Members are representatives of the people who are interested in the activities with which the vocational program is concerned.

Affect: Emotional feeling, tone, or mood.

Affective Disorder: Disorder of mood or feeling with resulting thought and behavioral disturbances.

Agriculture/Agribusiness Education: An occupation in agriculture/agribusiness is defined as an employment opportunity requiring competencies in one or more of the areas of plant science, animal science, soil science, management, mechanization, conservation, environmental quality, human relations, and leadership development needed to satisfactorily fulfill the employment needs in one or more of the functions of producing, processing, and/or distributing products and services related thereto.

Ambidextrous: Able to use either hand effectively.

Ambulation: The art of walking without assistance from others. It may include the use of crutches, canes, or other mechanical aids.

Amnesia: A disorder characterized by partial or total inability to recall or to identify past experiences; lack or loss of memory.

Amplitude: Largeness; wideness; breadth of range or extent; the distance through space a vibrating body moves; directly related to intensity of sound and sometimes used synonymously with intensity and volume.

Anomaly: A structure or function that deviates from the normal.

Anxiety Reaction: A neurotic reaction with diffuse anxiety and physiological anxiety indicators, such as sweating and palpitation based on an exaggerated state of fear or tension.

Apathy: Lack of feeling or response.

Aptitude: A combination of abilities and other characteristics, whether native or acquired, known or believed to be indicative of an individual's ability to learn in some particular area. Thus, "musical aptitude" would refer broadly to that combination of physical and mental characteristics, motivational factors, and conceivably other characteristics, that is conducive to acquiring proficiency in the musical field.

Articulation: The enunciation of words and sentences.

Assimilation: The reception and correct interpretation of sensory impressions.

Athetoid Cerebral Palsy: Characterized by difficulty with voluntary movements, especially in controlling those movements in the desired direction (demonstrated by extra or purposeless movements).

Atrophy: A wasting away or diminution in the size of cell, tissue, organ, or part.

Attention Span: The length of time a person can concentrate on a single activity before losing interest.

Audiogram: A graphic summary of the measurements of hearing loss, showing number of decibels loss at each frequency tested.

Audiologist: A professional person who is engaged in the study of the hearing function; responsible for the evaluation of persons with hearing problems and for the planning of education programs for people with hearing impairments.

Autism: A childhood disorder in which the child, responding

to unknown inner stimuli, is rendered noncommunicative and withdrawn. Characterized by extreme withdrawal and inability to relate to other persons.

Baseline: Beginning observations prior to intervention; level of functioning established or measured without any active intervention from the observer.

Behavior Modification: A technique of changing human behavior based on the theory of operant behavior and conditioning. Careful observation of events preceding and following the behavior in question is required. The environment is manipulated to reinforce the desired responses, thereby bringing about the desired change in behavior.

Bilateral: Pertaining to the use of both sides of the body in a simultaneous and parallel fashion.

Bilingual: Using or able to use two languages.

Blind (Legally) (see also Visually Handicapped): Having central visual acuity of 20/200 or less in the better eye after correction, or visual acuity of more than 20/200 if there is a field defect in which the widest diameter of the visual field subtends an angle distance no greater than 20^{o}.

Brain-Injured Child: A child who before, during, or after birth has received an injury to or suffered an infection of the brain. As a result of such organic impairments, there are disturbances that prevent or impede the normal learning process.

Business and Office Education: Business and office education is designated to meet the needs of persons enrolled in secondary, postsecondary and adult programs and has as its purpose initial preparation, the refreshing and/or upgrading of individuals leading to employment and advancement in business and office occupations.

Career Education: The totality of experiences through which one learns about and prepares to engage in work as part of a way of life.

Central Nervous System (C.N.S.): That portion of the nervous system to which the sensory impulses are delivered and from which the motor impulses pass out; in vertebrates, the spinal cord and brain.

Cerebral Dominance: The state in which one hemisphere of the brain is more involved in the mediation of various functions than the other hemisphere; a theory, expostulated largely by Orton, Delacato, and Travis, that one hemisphere is a dominant controller; right-hemisphere-dominant and ambidextrous people show mixed dominance.

Cerebral Palsy: Any one of a group of conditions in which motor control is affected because of lesions in various parts of the brain.

Conceptual Disorders: Disturbances in the thinking process and in cognitive activities, or disturbances in the ability to formulate concepts.

Concrete Mode: One of the styles of cognitive functioning that describes the child's approach to problem-solving at a simple, elementary level. Also, the use of tangible objects in instruction, as opposed to purely verbal instruction.

Congenital: Present at birth; usually a defect of either familial or exogenous origin that exists at the time of birth.

Consumer and Homemaking Education Programs: Education programs designed to help individuals and families improve home environments and the quality of personal and family life; includes instruction in food and nutrition, child development, textiles and clothing, housing, family relations, and management of resources, with emphasis on selection, use, and care of goods and services and on budgeting and other consumer responsibilities. Such programs are designed to meet the needs of persons who have entered or are preparing to enter useful employment in the home and are enrolled in secondary, postsecondary, or adult programs.

Continuum of Services: A full spectrum of services that are tailored to the individual needs of each student at any tiven time during the student's educational career.

Cooperative Vocational Education: A program of vocational education for persons who, through a cooperative arrangement between the school and employers, receive instruction, including required academic courses and related vocational instruction, by alternation of study in school with a job in any occupational field. The two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and employability. Work periods and school attendance may be on alternate half-days, full days, weeks, or other period of time in fulfilling the cooperative work-study (vocational education) program.

Coordinating Teacher (Teacher-Coordinator): A member of the school staff who teaches the related and technical subject matter involved in work experience programs and coordinates classroom instruction with on-the-job training.

Coordinator (Cooperative Education): A member of the school staff responsible for administering the school program and resolving all problems that arise between the school regulations and the on-the-job activities of the employed student. The coordinator acts as liaison between the school and employ-

ers in programs of cooperative education or other part-time job training.

Crisis or Helping Teacher: A teacher who provides temporary support and control to troubled students when they are unable or unwiling to cope with the demands of the regular classroom.

Curriculum: The organized content of a particular discipline with established parameters for instruction.

dB: Decibel.

Deaf: The child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

Deaf-Blind: Concimitant hearing and visual impairments which cause severe communication and other developmental and educational problems that cannot be accommodated in special education programs solely for deaf or blind children.

Desensitization: A therapeutic technique, based on learning theory, in which a client is first trained in muscle relaxation and then imagines a series of increasingly anxiety-provoking situations, until the person no longer experiences anxiety while thinking about the stimuli. The learning principle involved is reciprocal inhibition, according to which two incompatible responses cannot be made simultaneously by a person.

Disadvantaged: Persons (other than handicapped) who have academic or economic handicaps or have limited English-speaking abilities, who require special services and assistance in order for them to be able to succeed in regular vocational education programs.

--Academic handicaps are determined by (1) instructor's records that indicate that the student cannot succeed in vocational education programs without special support services, or (2) information obtained from tests that indicates that the student needs help in one or more academic areas in order to be able to succeed in regular vocational education programs.

--Economic handicaps are determined on the basis of the family income-level standards established by the United States Department of Commerce and/or the United States Department of Agriculture for the issuance of free and reduced-price meals, providing that the economic handicap is impairing the student's success in regular vocational education programs.

--Limited English-speaking ability. Persons who demonstrate minimal ability or lack the ability to express fundamental needs or thoughts lucidly, are unable to follow directions or react appropriately, and exhibit unnatural reticence in communicating with classmates may be considered to lack a functional command of the English language.

Distributive Education: Education that identifies a program of instruction designed to meet the needs of persons enrolled in secondary, postsecondary, and adult programs by:

--introducing and orienting each individual to the field of distribution,

--providing educational experiences that will enable the student to achieve career-level employment, and

--creating an occupational learning environment that will contribute to an increased awareness of career opportunities, advancement, and educational patterns for continued achievement.

Diversified Occupations Education Program: A program that provides an opportunity for schools in small communities to make available vocational education with supervised work experience in a variety of occupations. It can be utilized in communities that are not large enough to provide part-time jobs in sufficient quantity to support an occupational experience program in a particular area (e.g., agriculture, distributive, business, home economics, health, or trades and industries). If a program related to their vocational objectives is offered in the school, diversified occupations students should be enrolled in or have completed course work in this program. If it is not offered, the students could go directly into the diversified occupational education program in their senior year.

Due Process: The process through which the child and parents are informed of the pending educational placement and either agree in writing or appeal the placement based upon their rights in Public Law 94-142, Subpart E.

Dyslexia: A disorder of children who, despite conventional classroom experience, fail to learn to read. The term is most frequently used when neurological dysfunction is suspected as a cause of the reading disability.

Educable Mentally Retarded: Education terms used to describe retarded who can profit from academic education; mildly retarded--I.Q. generally from 50 to 75.

EEG: Electroencephalography.

Electroencephalograph: An instrument for graphically recording electrical currents developed in the cerebral cortex during brain function; often abbreviated EEG.

Epilepsy: A disturbance in the electrochemical activity of the discharging cells of the brain that is produced by a variety of neurological disorders. The causes are not clear. The electrochemical disturbances usually result in a seizure of some degree, i.e., in one of the following:

--petit mal--a mild seizure in which dizziness or staring into space takes place.

--grand mal--a seizure in which there are severe convulsions and loss of consciousness or a coma.

--Jacksonian--spasms limited mainly to one side of the body and often to one group of muscles.

--psychomotor--motor acts that the patient cannot remember performing.

Expressive Language: The ability to express or communicate verbal, written, or symbolic language.

Familial: Occurring in members of the same family; a familial disease.

Finger Spelling: The use of the manual alphabet to spell out words for the deaf.

Free Appropriate Public Education (FAPE): Special education and related services that are provided at public expense, including preschool, elementary school, or secondary school education.

General Education: Education that is concerned with the needs that are common to all members of society and that enable individuals to live with others, in order that they may be active in the social and democratic phase of life. Such education focuses upon knowledge, skills, and attitudes that are held useful for successful living, without reference or application to any particular vocation. General education fits people for life in general and acquaints them with the means of sustaining life.

Genetic: Pertaining to inherited factors.

Glaucoma: The intraocular pressure of the eye increases to such a level that the eye becomes damaged and sight is impaired.

Grand Mal Seizure: A type of epilepsy characterized by considerable neural discharge and usually lasting about five minutes. It begins with a severe contraction of the muscles

and proceeds to rhythmic movements and tremors.

Handicap: A physical or mental impairment which substantially limits one or more major life activities.

Hard-of-Hearing: A hearing impairment, either permanent or fluctuating, which adversely affects educational performance but is not included under the definition of "deaf".

Health Occupations Education: Education designed for persons who are preparing to enter one of the health occupations and for persons who are, or have been, employed in such occupations in hospitals or institutions or establishments other than hospitals that provide patients with medical services.

Hearing Loss Degrees:

--Mild--27-40 dB: The person will have difficulty with faint or distant speech, may need favorable seating and may benefit from speech reading, vocabulary, and/or language instruction or may need speech therapy.

--Moderate--41-55 dB: The person can understand conversational speech at a distance of three to five feet; probably will need a hearing aid, auditory training, speech reading, favorable seating, speech conversation, or speech therapy.

--Moderately severe--56-70 dB: Conversation must be loud to be understood; speech will probably be defective; may have limited vocabulary; may have trouble in classroom discussions; services used are at moderate level, but specific assistance from the resource/itinerant teachers in the language area may be needed.

--Severe--71-90 dB: The person may hear loud voices at one foot; may have difficulty with vowel sounds but not necessarily consonants; will need all services mentioned and require many techniques used with the deaf.

--Profound--91+ dB: The person may hear some sounds, but hearing is not the primary learning channel; needs all mentioned services with emphasis on speech, auditory training and language; may be in regular class part-time or attend classes that do not require language skills.

Home Economics Related Occupations Programs: Vocational education designed to meet the needs of persons (enrolled in secondary, postsecondary, or adult programs) who have entered or who are preparing to enter gainful employment in an occupation involving knowledge and skills of home economics subjects.

Human Services: Consists of specialized assistance to indivi-

duals for the purpose of fulfilling their needs. These services are diverse in nature and deal with people-oriented projects that will realistically aid individuals who are unable to help themselves.

Hyperactivity (Hyperkinesis): A personality disorder of childhood or adolescence characterized by overactivity, restlessness, distractability, and limited attention span.

Hypokinesis: Absence of normal amount of bodily movement and motor activity.

IEP Planning Meeting: A group meeting in which the students and teachers develop the Individual Education Plan.

I.Q.: A numerical score used to indicate a person's relative standing on an intelligence test.

Individual Educational Program (IEP): The IEP is a written statement for a handicapped child that includes the present level of educational performance, a statement of annual goals, short-term objectives, specific and related services to be provided, projected dates for initiation of services, deliverers of the services, and the evaluation procedures to be used.

Intelligence: A term used to describe a person's mental capacity; generally related to such things as problem-solving ability, ability to adapt to environment, or memory for learned material.

Itinerant Teacher: A teacher who travels from school to school helping children with special needs and acting as a consultant to the regular teacher.

Lateral Dominance: The preferential use, in voluntary motor acts, of ipsilateral members of the different paired organs, such as the right ear, eye, hand, and leg, or the left ear, eye, hand, and leg.

Least Restrictive Environment: The environment in which handicapped students are educated with nonhandicapped students in public or private schools or care facilities to the maximum extent possible and appropriate to the needs of the students.

MR: Mentally retarded.

Mental Age (M.A.): An expression of the level of performance obtained on a standardized test. Compared with the performance of the average person of a given chronological age (C.A.).

Mentally Retarded: Significantly subaverage general intelli-

gence functioning along with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.

Minimal Brain Damage: Early term for designating children with neurogenic learning and adjustment problems. The term is unsatisfactory because brain dysfunction is not necessarily due to damage. The term is often used and applied inaccurately for that reason.

Mobility Aids:

--Sighted guide: A sighted person who takes the blind person to a destination.

--Dog guide: A specifically trained dog used by a blind person to get to a destination.

--Cane: A white or silver cane often with a red tip used for getting to and from a destination.

--Electronic aids: Aids that are usually more successful when used as a companion with the cane. Two of the more acceptable ones are the Laser Cane and the Kay Spectacles.

Modality: An avenue of acquiring sensation; the visual, auditory, tactile, kinesthetic, olfactory, and gustatory are the most common sense modalities.

Multihandicapped: Concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically handicapped, etc.) which causes severe educational problems that cannot be accommodated in special education programs solely for one impairment. Does not include "deaf-blind".

Multiple Sclerosis: A disease marked by hardening in sporadic patches throughout the brain or spinal cord or both. Among its symptoms are weakness, incoordination, strong jerking movements of the legs and arms, abnormal mental exaltation, scanning speech, and nystagmus.

Multisensory: Generally applied to training procedures that simultaneously utilize more than one sense modality.

Muscular Dystrophy: One of the more common primary diseases of the muscles. It is characterized by weakness and atrophy of the skeletal muscles with increasing disability and deformity.

Neurological Lag: Neurological or nervous system development that is slower than other physical development.

Norm: An average, common, or standard performance under

specified conditions, e.g., the average achievement test score of nine-year-old children or the average birth weight of male children.

Ocular: Pertaining to the eye.

On-The-Job Training: Instruction in the performance of a job given to an employed worker by the employer during the usual working hours of the occupation. Usually the minimum or beginning wage is paid.

Ophthalmologist: A trained person with a medical degree who specialized in identification and treatment of eye diseases and disorders.

Optometrist: A person who studies the measuring of visual acuity and grinds lenses for glasses, does not have a medical degree, and cannot prescribe medicines or treat eye disease or disorders.

Oral Method: Method of teaching communication of language to deaf or hard-or-hearing patients by spoken words.

Orientation: An individual's use of relevant senses to establish a position and relationship to objects in the environment.

Orthopedically Impaired: Severe orthopedic impairment that adversely affects a child's educational performance. Includes impairments caused by: congenital anomaly, disease, amputation, fractures, burns, and cerebral palsy.

Other Health Impaired: Limited strength, vitality, or alertness due to chronic or acute health problems such as heart condition, tuberculosis, rheumatic fever, asthma, sickle cell anemia, epilepsy, etc., which adversely affects a child's educational performance.

Pathology: The study of the nature of disease and its resulting structural and functional changes.

Perceptual-Motor: A term describing the interaction of the various channels of perception with motor activity. The channels of perception include visual, auditory, tactual, and kinesthetic.

Perinatal: Occurring at or pertaining to time of birth.

Petit Mal Seizure: A type of epilepsy that is characterized by short lapses of consciousness; commonly begins in early childhood.

Phobia: Pathological fear of some specific stimulus or situation.

Physical Therapy: Helps overcome neuromuscular disability through exercise, massage, heat, water, light, sound, or electricity.

Postnatal: Occurring after birth.

Practical Arts Education: A type of functional education predominantly manipulative in nature that provides learning experiences in leisure-time interests, consumer knowledge, creative expression, family living, manual skills, technological development, and similar outcomes of value.

Prenatal: Existing or occurring prior to birth.

Prosthesis: The replacement of a part of the body by an artificial substitute.

Psychiatry: That branch of medicine that deals with mental disorders.

Psychomotor Seizure: A type of epilepsy characterized by automatisms that range from the unconscious continuing of normal activity to bizarre, inappropriate, or obsessive behavior.

Psychopathology: The study of the causes and nature of mental disease.

Psychosis: A severe emotional illness in which there is a departure from normal patterns of thinking, feeling, and actions. Commonly characterized by loss of contact with reality, distortion of perception, regressive behavior and attitudes, diminished control of elementary impulses and desires, and abnormal mental content including delusions and hallucinations.

Psychosomatic Disorder: An ailment with organic symptoms attributable to emotional and other psychological causes. The disorder is aggravated by or results from continuous states of anxiety, stress, and emotional conflict.

Readability Level: An indication of the difficulty of reading material in terms of the grade level at which it might be expected to be read successfully.

Receptive Langauge: Language that is spoken or written by others and received by the individual. The receptive language skills are listening and reading.

Resource Teacher: A specialist who works with children with special learning needs and acts as a consultant to other teachers, providing materials and methods to help children who are having difficulty within the regular classroom. The resource teacher may work from a centralized resource room in a school where appropriate materials are housed.

Seizures: Occur when there are excessive electrical discharges released in some nerve cells of the brain. The brain loses control over muscles, consciousness, sneses, and thoughts.

Self-Care Skill: The ability to care for oneself; usually refers to basic habits of dressing, eating, and so on.

Sensory Perception: Direct awareness or acquaintance through the senses.

Seriously Emotionally Disturbed: Child exhibits one or more of the following characteristics over a long period of time and to a degree that adversely affects educational performance: inability to learn which can't be explained by intellectual, sensory or health factors; inability to build and maintain satisfactory interpersonal relationships; inappropriate behavior or feelings under normal circumstances; pervasive mood of unhappiness or depression, or a tendency to develop physical symptoms or fears associated with personal or school problems. Includes children who are schizophrenic or autistic. Not the socially maladjusted unless it is determined that they are seriously emotionally disturbed.

Sheltered Workshop: A facility (usually in the community) that provides occupational training or protective employment of handicapped individuals.

Sign Language: A system of communication among the deaf through conventional hand or body movements that represent ideas, objects, and action; distinguished from finger spelling.

Special Class in a Regular School: Classes for students who receive their academic instruction from a special education teacher but may attend school-wide activities, such as assemblies, and concerts, or nonacademic classes, such as physical education or industrial arts, with their peers.

Special Day Schools: Schools designed for students who have a serious handicap or are multihandicapped and need comprehensive special education services for the entire school day.

Special Education: A subsystem of the total educational system responsible for the joint provision of specialized or adapted programs and services (or for assisting others to provide such services) for exceptional children and youths.

Special Educator: One who has had special training or preparation for teaching the handicapped; may also work cooperatively with the regular classroom teacher by sharing unique skills and competencies.

Special Vocational Needs: Vocational education for disadvantaged or handicapped persons supported with funds under the Vocational Education Act of 1976 (Public Law 94-482) to include

special educational programs and services designed to enable disadvantaged or handicapped persons to achieve vocational education objectives that would otherwise be beyond their reach as a result of their handicapping condition. These programs and services may take the form of modification of regular programs or be special vocational education programs designed only for disadvantaged or handicapped persons. Examples of such special educational programs and services include the following: special remedial instruction, guidance, counseling and testing services, employability skills training, communications skills training, special transportation facilities and services, special educational equipment, services and devices, and reader and interpreter services. Such education includes working with those individuals in need of vocational training who cannot succeed in a regular vocational program due to a handicapping condition or the effects of disadvantagement.

Specific Learning Disabilities: Disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written. Problems in listening, thinking, speaking, reading, writing, spelling, or minimal brain dysfunction, dyslexia, and developmental aphasia. Does not include: problems which are a result of visual, hearing, or motor handicaps of mental retardation or of cultural, environmental or economic disadvantage.

Speech Impaired: Communication disorder such as stuttering, impaired articulation, language impairment, or voice impairment that adversely affects educational performance.

State Plan: An agreement between a state board for vocational education and the U.S. Office of Education describing the vocational education program developed by the state to meet its own purposes and conditions and the conditions under which the state will use federal vocational education funds (such conditions must conform to the federal acts and the official policies of the U.S. Office of Education before programs may be reimbursed from federal funds).

Task Analysis: The technique of carefully examining a particular task to discover the elements it comprises and the processes required to perform it.

Technical Education: Shall be designed to train persons for employment as highly skilled technicians in recognized technical occupations requiring scientific knowledge. Technical education should be conducted primarily on the post-high school or adult level.

Trade and Industrial Education: Education to provide students with an understanding and the technical knowledge of our industrial society, to develop the necessary skills for employment in the skilled and semiskilled trades, crafts, or occupations that function directly in the designing, producing, processing,

assembling, maintaining, servicing, or repairing of any manufactured product. Training in trade and industrial education enables young men and women to prepare for initial employment in trade, industrial, and technical operations. The basic principle of such education is learning by doing. The needs of the individual worker are the foundations upon which all instructional activity is based. Instructional objectives are tied to the skill or trade being pursued as a career.

Trauma: Any experience that inflicts serious damage to the orfanism; may refer to psychological as well as physiological insult.

Visually Handicapped: Visual impairment that adversely affects educational performance, even with correction. Both partially sighted and blind.

Vocational Education: Vocational or technical training or retraining that is given in schools or classes (including field or laboratory work and remedial or related academic and technical instruction incident thereto) under public supervision and control or under contract with a state board or local educational agency. The training or retraining is conducted as part of a program designed to prepare individuals for gainful employment as semiskilled or skilled workers or technicians or subprofessionals in recognized occupations in advanced technical education programs, but excluding any program to prepare individuals for employment in occupations generally considered professional or which require a baccalaureate or higher degree.

Vocational Educator: Persons who have had training or occupational experience in their chosen area of specialization.

Vocational School: A school that is organized separately under a principal or director for the purpose of offering training in one or more skilled or semiskilled trades or occupations. It is designed to meet the needs of high school students preparing for those who are employed.

Vocational Subject: Any school subject designed to develop special skills, knowledge, and information to enable the learner to prepare for or to be more efficient in a chosen trade or occupation.

Work-Study Program: A program designed to provide part-time employment for youths who need the earnings from such employment to commence or continue a vocational education program.

CHAPTER I

ACCOMMODATING THE SPECIAL-NEEDS LEARNER IN THE VOCATIONAL CLASSROOM

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Introduction

Historically, the handicapped have been a misunderstood and somewhat hidden segment of our population. In the past, society has grouped all disabilities in one category labeled "handicapped" and, due to a level of nonunderstanding, has separated these individuals into groups for various activities. "Public education which would be able to do a great deal for the handicapped has in the past continued this separation of handicapped students from their peers and placed them in special classes" (Stewart, 1979).

In the arena of public education and, subsequently, in society as a whole, there is now new hope for the handicapped or disabled individual. This new hope comes in the form of the Education for All Handicapped Children Act known officially as Public Law 94-142 (P.L. 94-142). This piece of federal legislation has been lauded as the most significant educational legislation of this century. The major thrust of P.L. 94-142 is to "guarantee a free appropriate public education for all handicapped children, ages 3 to 21" (Hull, 1977, p. 7). The ramifications of this legislation, both stated and implied, are far-reaching and significant in their effect on public education and society as a whole.

Every public law has accompanying regulations. Regulations are promulgated to carry out the intent of the law. On August 23, 1977, the final regulations for P.L. 94-142 were put in effect by public

declaration; the regulation's specific purpose is to do the following:

> Insure that all handicapped children have available to them a free appropriate public education which includes special education and related services to meet their unique needs, to insure that the rights of handicapped children and their parents are protected, to assist states and localities to provide for the education of handicapped children, and to assess and insure the effectiveness of efforts to educate these children. (Strully, 1978, p. 55)

Both the law and the regulations are very clear in their intent; however, only the handicapped students, their parents, and professional educators working together will make the law a reality.

Implications of P.L. 94-142 for Industrial Arts and Vocational Education

In developing education programs for the handicapped, the following ideal, as stated by vocational teacher-educator Marc E. Hull, should be recognized:

> If we can accept the premise that all persons are vocationally limited (or handicapped), then denying any particular group access to appropriate vocational education solely on the basis of a handicap constitutes an act of discrimination. And, as many school districts have learned, or will ultimately learn, discrimination in any form is much too costly to perpetuate at public expense. (Hull, 1977, p. 3)

The major purpose of general education and, specifically, vocational education is to prepare our youth to function independently in and contribute to our society. "Education for the good life has been a basic philosophical tenet in the United States since the mid-nineteenth century." (Young et al., 1969, p. 84) The good life has been defined differently by various groups over the years, but a commonly held view is that independent, economic viability is basic to the good life of all individuals.

In relating to the role of vocational education in preparing for the good and independent life, Phelps (1976) indicates, "Education

leading to an independent occupational role has been a major part of the educational endeavors in most free societies" (p. 1). Vocational education and the pre-vocational instructional areas of industrial arts education can play an integral role in preparing nonhandicapped individuals, as well as handicapped people, for independent, contributing lives in society. Supporting this premise, Hull states the following:

> Possessing marketable vocational skills is one of the most impressive credentials that anyone can present to a prospective employer. For the handicapped, possessing marketable skills is proof of their ability to reduce the anxieties that employers express about hiring the handicapped. Participation in vocational education, therefore, could be viewed as an essential pathway to employment for many handicapped persons especially for individuals whose formal education will terminate with high school. Many handicapped persons have come to regard vocational preparation as a basic necessity, which is yet another appropriate rationale for serving the handicapped in vocational education. (Hull, 1977, p. 3)

The commitment to place handicapped individuals into regular classroom settings is no longer one which school officials have the choice in making. The decision has been made through legislation. Administrators and teachers are now faced with the tasks of integrating, or mainstreaming, handicapped students into educational programs so that handicapped individuals may take advantage of the appropriate public education of their choice.

Barriers to this integration are many and varied in form. The most obvious of these are physical barriers such as stairs and multiple-level school buildings which prohibit handicapped students from reaching classrooms and laboratories. Interestingly enough, these types of physical barriers are often the easiest to remove.

The greatest barriers may be those which are not immediately seen, those of administrator and teacher attitude, anxiety, and nonunderstanding of the handicapped individual. Barriers also extend to the

laboratory-shop classroom setting where provisions must be made for proper and safe use of tools and equipment associated with determined skills involved in vocational instruction.

Purpose of This Text

Classroom teachers have been presented with an overwhelming mandated challenge. This challenge is to provide educational opportunities for handicapped students within the structure of the regular classroom environment. This challenge takes on a particular significance for the secondary vocational instructor who must not only be concerned with the cognitive development of the student but must also consider affective skill development in a particular vocational speciality area.

Most secondary vocational area teachers, through no fault of their own, fall short in the specific knowledge, skills, and competencies needed to work with the special-needs student. The purpose of this text is to provide information for vocational teachers that will enable them to effectively plan and conduct educational programs which integrate the special-needs learner into the regular classroom setting.

In viewing this educational and personal challenge, the teachers are confronted with a number of known factors:

> The decision of whether or not schools should provide educational opportunities for special-needs students in the regular classroom setting has been made for them. Public Law 94-142, the Education for All Handicapped Children Act, and its supportive legislation, is a reality.
>
> Special-needs students will be placed in regular school programs in the "least restrictive environment".
>
> In order to facilitate meaningful classroom instruction, teachers must develop (in a limited amount of time) compe-

tencies needed to work with handicapped students.

The classroom teacher does not stand alone. Regular classroom teachers will work in cooperation with the following:

a. Handicapped education specialists,
b. Psychologists and medical personnel,
c. Administrators,
d. Parents,
e. Other teachers.

(Bruwelheide, 1979, p. 34)

Thus, it is necessary to provide close articulation with all phases of particular student's educational program. It is hoped that this handbook will provide sufficient background, knowledge, and guidelines to permit vocational teachers, administrators, and parents to provide appropriate vocational education opportunities for the special-needs handicapped population in the public schools.

The Handicapped Student in Vocational Education

Who is handicapped and what does that mean? In recent years many segments of our society have accepted the challenge of serving the needs of the handicapped with a dedication and seriousness of great proportion. The realm of public education is one of those societal segments that has accepted the challenge to do the most for the handicapped. This text deals with serving selected vocational education needs of the handicapped in their quest for attaining knowledge and skills in various vocational education disciplines.

In the specific instance of vocational education, the noted special-needs vocational educator, Katy Greenwood (1977) states that the handicapped are "those students who cannot succeed in regular vocational programs" (p. 47). The number of students which may comprise this group is considerable and is in itself a topic for debate. Vocational administrator and researcher Cadar Parr (1975) notes that,

"It has been estimated that over 25 percent of young people in schools today need some type of extra help in order to reach their full potential" (p. 21). Parr's figure includes handicaps and disabilities of all kinds. A more realistic figure is presented by teacher-educator Dean Corrigan as he speaks of those directly able to benefit from the provisions of P.L. 94-142:

> The beneficiaries of this Act are approximately 12% of the human beings in the United States between the ages of 3 and 21 who have a handicap. (Corrigan, 1978, p. 12)

When an examination is made of the number of handicapped students actually served by vocational education, a wide disparity in number is observed. Vocational teacher-educator Allen Phelps (1978) observes that nationally "the handicapped comprised less than 1.7% of the student enrollment in vocational education during the 1974-75 school year" (p. 14). This is a surprisingly low representative percentage for a group that may consider secondary or post-secondary vocational or career education to be their terminal educational experience. Phelps continues by stating the following:

> ...This percentage is bound to increase because of the new legislation...as the goal of providing educational opportunities to all of the handicapped is approached, increased emphasis must be given to the quality and appropriateness of those opportunities. (Phelps, 1978, p. 15)

How Teachers May Prepare for Working with the Handicapped

Perhaps the greatest educational implication calling for change is in the area of teacher education. The dualism in thought and teacher education preparation regarding "special vs. regular" teacher education must be re-examined. The education time lag that exists between teacher education and classroom practice will be one of the major obstacles to realizing the goals of P.L. 94-142. In a somewhat

idealistic manner, Corrigan exclaims the following:

> This reform is not an impossible challenge. Nor is the teacher education situation one that can be corrected by minor tinkering. As the AACTE Bicentennial Commission Report states, "What the teaching profession needs is a totally new set of concepts regarding the nature of the emerging human services society, its educational demands, the kinds of delivery systems necessary to provide public access to continuing educational opportunity, and the types of professional personnel and training required to reform public education."
> ...A major shakeup is needed in the form and substance of teacher education from the first introduction through the teacher's entire career. Financial and personal resources must be directed toward strategies that link schools seeking to change with teacher education institutions seeking to break out of established patterns. (Corrigan, 1978, p. 14)

Out of the basic content of P.L. 94-142 comes the following statement:

> The Education for All Handicapped Children Act identifies the regular classroom as the "least restrictive environment", unless another setting is prescribed as more appropriate to meet a child's special needs. If other settings are used, they must be justified. (Corrigan, 1978, p. 11)

Fulfilling this responsibility places every classroom teacher in the position of having to deal with the special-needs student on a daily basis.

The implication for teacher education is that through inservice and preservice activities institutions of higher learning must prepare the classroom teacher to effectively serve the handicapped student. In the long run this preparation may be difficult to provide. It is fully recongized that teacher education is the fundamental place to start. In speaking to the needs of vocational educators, Greenwood (1975) states, "Probably the most significant way of providing for the disadvantaged in vocational education is that of staff development, and personnel development" (p. 52).

The dilemma faced by teacher education as a whole is stated by Martin (1974), "...efforts to provide training and experience for regular classroom teachers are not keeping pace with the efforts to mainstream" (p. 152). This has been brought about because while P.L. 94-142 is specific to mandate to individual states and, subsequently, to the local school districts, time-frame mandates to the institutions of higher learning who provide teachers are not as clear. In support of this statement teacher-educator Maynard Reynolds writes the following:

> The legal force of P.L. 94-142 is directed to school districts and their employees. Teacher-educators have not been enjoined directly in any legal sense in these developments, although the regulations in the amendments to Section 504 of the Federal Rehabilitation Act that affect college environments are having effects. (Reynolds, 1978, p. 28)

Teacher education should be the area that takes the lead in the implementation of P.L. 94-142.

If teacher education is to take this leading role, many attitudes must change. One of the major changes required is the reluctance of teachers to accept the handicapped individual. In reviewing a national assessment study of vocational educators, Phelps cites an Olympus Research Corporation spokesman as follows:

> One of the most often mentioned constraints limiting the expansion of vocational education programs for the handicapped was the reluctance of teachers in regular classrooms to accept the handicapped, or the inability of teachers to instruct handicapped students. Thus, teacher training in special education techniques was considered a necessity, not only to help affect program expansion, but also to improve program quality. (Phelps, 1976, p. 7)

Preservice and inservice teacher education is the place to begin to reduce this reluctance, real or perceived anxiety, and general non-understanding of the handicapped student.

An additional concern is that many classroom teachers fear that they will be forced into a disproportionate amount of training and day-by-day classroom activities when they must deal with handicapped students. In response to this expressed fear, Haisley and Gilbert respond the following:

> Many educators have viewed the requirements of P.L. 94-142 and the implied competencies necessary to teach children with learning problems, together with the requirement of due process, as some new conspiracy against them. We believe that good teachers have always used the essential teaching competencies required for successful implementation of P.L. 94-142. (Haisley and Gilbert, 1978, p. 30)

The implication here is that good teachers will be able to accept the challenge of the handicapped students while other teachers may have to evaluate their basic professional philosophies on education and improve their classroom techniques, abilities, and understanding.

The consequences that P.L. 94-142 will bring to the classroom teacher are not entirely clear; teacher-educators Schlechty and Turnbull offer the following:

> What is not clear, however, is precisely how the implementation of P.L. 94-142 will affect the teacher's role. Two possibilities are suggested. First, the implementation of P.L. 94-142 will further bureaucratize schools and classrooms and lead to a consequent diminution of the classroom teacher's power and authority--perhaps to the point that the regular teacher will become nothing more (or less) than a technician carrying out the directives of individuals with expertise in the area of special education. An example of such expertise is the diagnosis and remediation of learning difficulties.
>
> The alternative outcome is that P.L. 94-142 will enhance the status of the classroom teacher as a professional and bestow upon him or her authority to make pedagogical decisions that require specified performance from others (e.g., diagnosticians, special educators, curriculum specialists, evaluators, and parents). P.L. 94-142 has the potential of making the classroom teacher first among equals in the area of planning and implementing instructional programs for youngsters. The response teacher-educators develop to P.L. 94-142 will go far toward de-

> termining which of these consequences will come about. (Turnbull, 1979, p. 34)

Teacher education, therefore, has an important role to play in the success of P.L. 94-142. With adequate preparation more teachers will develop attitudes that are essential to the objectives of P.L. 94-142.

So, it may be inferred that, while teacher education directed toward the end of successfully implementing P.L. 94-142 will cause some change in structure, much of the foundation for competency development already exists. Of necessity, however, teacher education programs may have to improve their basic programs, materials, and procedures. In planning this phase of P.L. 94-142 implementation, Haisley and Gilbert make the following suggestions for teacher education in general:

> A first step toward change should be inservice training for college faculty so that they too are knowledgeable about P.L. 94-142 and its implications for changing organizational patterns in local schools. A second step should be toward integrating the knowledge and skills of regular and special educators so that they are better prepared to teach preservice students. Third, and finally, we teacher-educators should become involved with school programs and the children in our schools for whom the law was intended. (Haisley and Gilbert, 1978, p. 33)

Continuing this thought, Reynolds concludes the following:

> Much inservice teacher education on P.L. 94-142 is devoted to the superficialities of "filling out the forms" and like matters. Teacher-educators need to examine the situation for its fundamental requirements and, as quickly as possible, direct their activities beyond mere surface requirements. They have a responsibility for providing leadership to identify the pivotal ideas and skills needed to implement P.L. 94-142, and to help organize training activities that penetrate to the fundamentals. (Reynolds, 1978, p. 29)

Teacher characteristics. Many practicing teachers have the basic skills needed to be successful teachers of the handicapped student, e.g., a practicing knowledge of educational foundations, subject

matter, and curriculum. Following these, the characteristic most needed is that of constructive teacher attitudes toward the handicapped student. So important is teacher attitude that an entire section of this text is devoted to the topic of attitudes.

Probably the greatest barrier to the handicapped student is the attitude barrier. Teachers may assist in the reduction of attitude barriers by leading their classes with a proper and positive attitude toward the handicapped. A major step to be made by the teachers in the reduction of attitude barriers is to focus on the students' abilities rather than disabilities.

Another important teacher characteristic is that of realistically accepting handicapped students for what they are and by refraining from attempting to make them well. If teachers do not accept the ultimate limits of the handicapped abilities, then these educators will probably experience some degrees of failure.

Teacher competencies. Much has been written about the competencies required by teachers who work with the disadvantaged and handicapped. The categories of these competencies range from simple clerical skills to the very skillful psychological management of the emotionally disturbed. Throughout the various studies pertaining to competencies, categorical groupings of competencies can be devised and are applicable to those listed by many authors. As indicated by vocational teacher-educator V. O. Scott, these groupings include the following:

a. Proficiency in dealing with rapidly changing situations that arise in the classroom.
b. Perceptiveness and capability in meeting psychological needs of students.
c. Skill in modifying learning experiences in the content areas.

d. Responsiveness to situations that arise in the classroom to help students acquire and practice social skills.
e. Flexibility in decision making.

(Phelps, 1976, p. 34)

The aforementioned competencies relate to the operational classroom level of teacher action. Before such action occurs as the result of the integration of the handicapped students in the least restrictive classroom environment, more basic knowledge and/or competencies are needed. "The area in which educational personnel are least knowledgeable and skilled is the legal provisions established by P.L. 94-142" (Haisley and Gilbert, 1978, p. 30). The legal requirements of all handicapped students must be understood and implemented before classroom activity is possible and the classroom competencies noted by Scott (Phelps, 1976, p. 34) are required. The overriding implication to be remembered is that learning experiences and environment for the handicapped should be appropriate. To assure this appropriateness, a sound understanding of the due process requirements of P.L. 94-142 is necessary.

Summary

Providing appropriate educational opportunities for handicapped students in the vocational area classroom is a very complex issue. While it is not practical to develop all vocational teachers into "special educators", it is possible to provide these teachers with knowledge and skills which will enable them to offer the handicapped student appropriate vocational education opportunity.

CHAPTER II

WHAT THE LAW REALLY SAYS ABOUT EDUCATING THE HANDICAPPED

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Historical Overview--Legislation for the Handicapped

Federal legislation that has a direct impact on education for the handicapped has culminated with the passing of Public Law 94-142 or the Education for All Handicapped Children Act of 1975. One must realize that this act does not stand alone in efforts to provide educational opportunity of handicapped individuals. This is especially true when the many areas of vocational education are considered.

Public Law 94-142, the Education for All Handicapped Children Act of 1975, was the prime force in the late 1970's that focused attention on the handicapped. This act and parallel state and federal legislation have been supported by educators who believe that there are positive values derived by handicapped students who are educated in the regular classroom (Lilly, 1970; Christopolos and Renz, 1969). Courts have judged that denial of public education is unconstitutional (PARC vs. Maryland, 1971; Mills vs. Board of Education, 1972) and that the opportunity of the different student to receive an appropriate education is affirmed (Lau vs. Nichols, 1974; Serna vs. Portales, 1972). While the legal actions instrumental in the development of P.L. 94-142 are numerous, describing specific cases aids in clarifying how the courts contributed to the movement for equality of education for the handicapped.

Education for the handicapped has evolved as our national social and educational climate has matured and progressed. The following is an overview of the litigation and legislation that affected education

in general and vocational education in particular.

Brown vs. Board of Education--1954. The single main point of this litigation was the Supreme Court's decision that "in the field of public education, the doctrine of separate but equal has no place" (Bauer, 1978, p. 49). Although this court case primarily concerned segregation of races, it heralded the beginning of social feeling for the handicapped as well. Special-needs educator William Bauer notes the following:

> The separate but equal findings have been extended to include minorities other than racial. The analogies between the blacks and/or handicapped and the respective experiences in our society are quite similar, particularly in the area of social distance, stereotypes, negative attitudes and segregation. (Bauer, 1978, p. 49)

This litigation set the stage for future court cases and legislation which would make equal and appropriate public school education possible for the handicapped.

The Vocational Education Act of 1963. The case of Brown vs. Board of Education forwarded consideration of integrated educational opportunities for all students in all disciplines. Legislation affecting education for students wishing to pursue vocational education interests, and, indirectly, the prevocational area of industrial arts, was founded in the 1963 Vocational Education Act.

Many factors led to the writing and passing of this legislation. Vocational education researcher Dennis Nystram (1973) indicates that "the real importance of any historical legislative enactment exists in its relation to the national condition at the time of its passage and in its effect on contemporary and future legislation" (p. 5). The Vocational Education Act of 1963 was significant since it reflected the educational and subsequent social concerns for the potential of

handicapped individuals. This act was precipitated by President John F. Kennedy and his appointed body of vocational education specialists as they attempted to review and evaluate existing vocational education legislation and to make recommendations for improving and redirecting national vocational education programs.

Nystram (1973) further states, "Legislation, in particular occupational education legislation, is a process through which cultural need is identified, interpreted, and acted upon in a relationship with the various pressing economic, political, professional, and social factors characteristic of the society at a specific point in time" (p. 36). The central theme, therefore, is manifested by a broadening of education for work and a real emphasis on serving the youth of this country. The new program and the amendments to Smith-Hughes and subsequent George-Barden legislation acted to remove much of the restrictiveness that had made these two acts somewhat obsolete. In the Declaration of Purpose of the 1963 Vocational Education Act, Section 1, the need for program flexibility was emphasized by stating the need for "vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training" (Vocational Education Act, Section 1, 1963).

Another very important concept included in the recommendations set forth by President Kennedy's panel of consultants was that vocational education in American needed "programs for people" (Nystram, 1973, p. 37). The act further emphasized that a somewhat unserved segment of the population was comprised of handicapped individuals.

At that time the committee labeled the handicapped as "Youth with Special Needs" (1963 Vocational Education Act, Section 4(A), 1963, p. 7). Further definition of the law reveals that "Vocational Education shall be provided for persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in regular vocational education programs" (Greenwood, 1975, p. 47).

As in all educational legislation of this type, the main incentive for compliance is the allotment of funds. In the case of the 1963 Act, it was stated that 15% of the states' alloted funds would be spent in the area of special needs. Some serious points are raised by Greenwood as she states the following:

> We in vocational education have complied with the federal laws as we should have; we have spent most of that money (the 15 percent) for the purpose intended; and yet, we must admit that today, 12 years after that first mandate, we must face some uncomfortable facts:
>
> 1) Federal dollars have been the main source of incentive for providing support for students with special needs.
>
> 2) It is true that vocational education in some instances has failed to recruit and maintain large percentages of disadvantaged students into programs that could be helpful to them. Evidence can show that in some instances there has been an unwillingness on the part of vocational educators to provide flexibility in programs designed to meet those special needs of students.
>
> 3) And it is true that our main cadre of personnel are not prepared to deal with students with special needs and university training programs do not seem to be moving rapidly to overcome this discrepancy.
>
> So we have done what we should be doing in a sort of half-hearted, sometimes unwilling way, and the unspoken message has inferred: "This is not our real purpose...we must not become the dumping ground for all of education's problems."
>
> (Greenwood, 1977, p. 41-48)

The inference made by Greenwood is that after a period of trial and evaluation the 1963 Vocational Education Act was not working as

had been anticipated. Vocational programs have not met the original intent of the legislation:

> The Vocational Education Act of 1963 was the first legislation to specifically charge vocational education with the responsibility for providing vocational programming for the handicapped and disadvantaged. This landmark legislation first identified special needs students as those individuals having academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program. (Phelps, 1976, p. 3)

This legislation may have mandated too much of a change too quickly for traditional vocational educators or perhaps the financial incentives may not have provided enough incentive to cause this legislation to be implemented. Whatever the reason, the Vocational Education Act of 1963 did not work as anticipated and led to the enactment of further legislation, including P.L. 94-142.

Hobson versus Hanson. The decision from Hobson versus Hanson in 1967 is considered to be the most far-reaching action on educational classification by the U.S. courts. The major question involved was a tracking system in Washington, D.C., public schools. Students were placed according to scores on group standardized aptitude tests. The group tests placed a disproportionate amount of blacks in the lowest educational track. No evidence of adequate remediation was found nor were compensatory education programs to assist the students. Educational opportunities were judged as limited for students of equal educational opportunities. The majority of the teachers involved were regular educators. The judgment that a restricted situation prevented students from receiving an appropriate education has appeared in P.L. 94-142 as the least restrictive environment mandate.

The Vocational Education Amendments of 1968. The failure of the 1963 Vocational Education Act began to produce change in opportunities

for the handicapped. Phelps (1976) verifies this failure by stating, "After four years had passed, however, this general legislative change had produced few new opportunities for handicapped individuals" (p. 3).

Recognizing this failure, Congress required in the 1968 Amendments to the Vocational Education Act that each state spend 25% of its basic federal grant for vocational education exclusively to finance "special educational programs and services designed to enable disadvantaged and handicapped persons to achieve vocational education objectives that would otherwise be beyond their reach as a result of their handicapped condition" (Vocational Education Amendments of 1968, Part B). Of the basic grant, 15% was to be spent on programs for the disadvantaged, while 10% was to be spent on vocational programs serving the handicapped. The total value of these "set-aside" monies was approximately $20 million each year for vocational education of the disabled.

The intent, then, of the 1968 Amendments, Part B, pertaining to vocational education for the handicapped, was to increase the financial incentive to states for providing more vocational education opportunities. Additional implications of these amendments that affected educational programs for vocational education and industrial arts are found in the Act's General Provisions as noted in the following by Nystram:

> The first section deals with the Act's General Provisions; it declared the same purposes as the 1963 Act but emphasized vocational education in postsecondary schools. The definition of vocational education also was broadened to bring it closer to general education. (Nystram, 1973, p. 41)

Broadening of the provisions of vocational education legislation would

permit the inclusion or use of funds in areas not previously permitted, thereby increasing the chances of acceptance of the act. Some latitude in the use of these monies was provided by making federal funding available to states with the approval of its State Plan by the Commissioner of Education.

Pennsylvania Association for Retarded Children versus The Commonwealth of Pennsylvania. The case of the Pennsylvania Association for Retarded Children versus the Commonwealth of Pennsylvania (PARC) in 1971 was filed to challenge the constitutionality of mentally retarded children being excluded from public education. Three important types of reform were instituted which would ultimately affect the regular classroom teacher. These three reforms are as follows: (a) all mentally retarded children had the right to a free public education and all previously excluded were to be located and brought into the public system; (b) systematic evaluation and re-evaluation of those mentally retarded already in classes were to be conducted; and (c) contents of programs for the handicapped students were now required to be evaluated to determine if they were "appropriate". Even though this decision was in 1972, judicial mandate does not insure change and the case has been recently reopened with one of the causes being lack of involvement of the regular classroom teacher in the planning of appropriate educational programs.

Mills versus The Board of Education, Washington, D.C., 1972. This court case established due process procedures and hearing procedures for the handicapped. Seven children were denied publicly supported education due to being labeled hyperactive, mentally retarded, and emotionally disturbed. The court determined there was a failure to provide proper educational opportunities and that there had been

exclusion of the students without due process. This case provided the precedence for no eligible child being excluded from education and that a periodic review of the child's status and progress must be made. Additionally, the adequacy of educational alternatives is to be examined during the periodical review for appropriateness of the educational placement.

Wyatt versus Stickny. This decision, in 1972, provided that residents of institutions have a right to the least restrictive alternative or condition of treatment necessary to achieve progress toward habilitation. Additionally, no mentally retarded person shall be admitted to an institution if programs in the local community could provide appropriate services. The right to a normalized environment was the major factor related to the regular classroom teacher.

The 1973 Rehabilitation Act and Section 504. During 1972, Congress began reviewing federally funded vocational rehabilitation programs for the handicapped to develop legislation which would expand services to the handicapped. Very early in these proceedings it was apparent that major changes in the law were necessary.

The major thrust of the resulting Vocational Rehabilitation Act of 1973 and, specifically, Section 504 was that handicapped persons cannot be discriminated against solely on the basis of their handicap. Thus, Section 504 became the first federal civil rights law to protect the rights of handicapped persons.

The overall implications of the 1973 Rehabilitation Act for education are great. In addition to Section 504, other sections will also be of interest to local education agencies.

Section 502: Mandates the elimation of architectural barriers which would make buildings inaccessible to the

handicapped.

Section 503: Any federal contractor must take affirmative action to employ the handicapped.

(1973 Rehabilitation Act, 502, 503)

The rules and regulations of Section 504 and the resulting implications for public education are very broad and encompassing. Selected portions of Sub-part D--Preschool, Elementary and Secondary Education and their implications (1973 Rehabilitation Act, Section 504) are as follows:

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
Subpart D--Preschool, Elementary, and Secondary Education	
84.31 Application of this subpart	
Subpart D applies to preschool, elementary, secondary, and adult education programs and activities that receive or benefit from Federal financial assistance for the operation of such programs or activities.	
84.32 Location and Notification	
A recipient which operates a public elementary or secondary education program shall annually:	
(a) undertake to identify and locate every qualified handicapped person residing in the recipient's jurisdiction who is not receiving a public education; and	Child-find programs must be implemented and maintained.
(b) take appropriate steps to notify handicapped persons and their parents or guardians of the recipient's duty under this subpart.	

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
84.33 Free Appropriate Public Education	
(a) General	
A recipient that operates a public elementary or secondary education program shall provide a free appropriate public education to each qualified handicapped person who is in (domicile or actual residence) the recipient's jurisdiction, regardless of the person's handicap.	All qualified handicapped persons must be provided a free and appropriate education.
(b) Appropriate Education	
(1) Regular or special education must be provided that is designed to meet the needs of handicapped persons as adequately as the needs of nonhandicapped persons are met.	Handicapped individuals must be provided an educational program which is of the same quality as the program for nonhandicapped individuals.
(2) Implementation of an individualized education program developed in accordance with the Education of the Handicapped Act is one means of providing an appropriate education.	Individual Education Program as required by P.L. 94-142 is not required but is one alternative strategy of providing appropriate education. Compliance may require development of an inservice program to train or retrain personnel to deal with students exhibiting specific handicapping conditions and making available appropriate materials and equipment.
(3) Recipient remains responsible for handicapped person if recipient refers such person to a program than the one it operates.	State education agencies and local education agencies remain responsible regardless of the agency which provides services.
(c) Free Education	
(1) Education and related ser-	Since recipient is respon-

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
vices must be provided without cost to the handicapped person except for those fees that are imposed on handicapped persons. Recipient still responsible for costs if it refers handicapped person to another program.	sible for costs, an interagency financial agreement will have to be consummated so that public agency (recipient), rather than handicapped individual and his/her family, will bear the costs for provision of education and related services.
(2) Recipient will be required to pay additional transportation costs if it refers handicapped person to another program.	Recipients will be responsible not only for educational costs if handicapped child is referred to a private institution. Recipients will also be responsible for room and board costs if referral is made to a residential program.
(3) Recipient will be required to pay room and board costs if it refers handicapped person to a residential program.	
(4) If recipient has conformed with this section and handicapped person chooses placement in a private school.	
(d) Compliance	
Recipients cannot exclude any qualified handicapped person from a public elementary or secondary education after June 3, 1977, and must be in full compliance with the other requirements at the earliest practicable time and in no event later than September 1, 1978.	Handicapped individuals cannot be excluded from public elementary or secondary education, and must be identified, evaluated, placed, and serve as soon as possible and in no event later than September 1, 1978.
84.34 Education Setting	
(a) Academic Setting	
A recipient shall educate each handicapped person in its jur-	State education agency must accommodate requirement that

PROPOSED RULES AND REGULATION FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
isdiction with persons who are not handicapped to the maximum extent appropriate to the needs of the handicapped person.	local education agencies provide education in the least restrictive environment. (To the maximum extent appropriate handicapped children must be educated with non-handicapped children.) Inservice training for regular education teachers and administrators will be necessary.
(b) Nonacademic Setting Handicapped children must also be provided nonacademic services (meals, recess periods, etc.) in as integrated a setting as possible.	Re-examination of nonacademic services for accessibility and nondiscrimination may need to be undertaken.
(c) Comparable Facilities If separate facilities and services for the handicapped are necessary, these facilities must be comparable to other facilities provided by the recipient.	Facilities, services, and activities for the handicapped students must be qualitatively comparable to those for nonhandicapped.
84.35 Evaluation and Placement (a) Preplacement evaluation. A recipient may not take any action regarding the educational placement, denial of placement, or transfer of placement of a person who, because of handicap, needs or is believed to need special education or related services without fully and individually evaluating such person's special educational needs.	State must assure the appropriate number of qualified diagnostic staff are available to provide adequate assessment of student needs.
(b) Evaluation procedures. A recipient shall establish standards and procedures for the evaluation and placement of persons, who, because of handicap, need	

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
or are believed to need special education or related services which ensure, at a minimum that:	
(1) Tests and other evaluation materials have been validated for the specific purpose for which they are used and are administered by trained personnel in conformance with the instructions provided by their producer.	State must examine evaluation materials currently used to ascertain their validity for specific populations to be assessed. This process shall include development of criteria by which to validate evaluation instruments and determine a level of test reliability for both manufactured and teacher-made assessment devices. Staff training must be provided to develop staff competency to apply instruments.
(2) Tests and other evaluation materials include those tailored to assess specific areas of educational needs and not merely those which are designed to provide a single general intelligence quotient;	
(3) Tests are selected and administered so as to best ensure that, when a test is administered to a student with impaired sensory, manual, or speaking skills, the test results accurately reflect the student's aptitude or achievement level or whatever other factor the test purports to measure rather than reflecting the student's impaired sensory manual or speaking skills (except where such skills are the factors which the test purports to measure).	
(c) Placement procedures. A recipient shall interpret evaluation data and make placement decision	Multifactored assessment must take place before placement is required.

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
by:	
(1) drawing upon information from a variety of sources, including aptitude and achievement tests, teacher recommendations, physical condition, social or cultural background, and adaptive behavior;	Training in the group decision-making placement process may be necessary.
(2) establishing procedures to ensure that information obtained from all such sources is documented and carefully considered;	
(3) ensuring that the placement decision is made by a group of persons, including persons knowledgeable about the child, the meaning of the evaluation data, and the placement options, and	
(4) ensuring that the placement decision is made in conformity with 84.34.	
(d) Re-evaluation. A recipient to which this section applied shall establish procedures, in accordance with paragraph (b) of this section, for periodic re-evaluation of students who have been provided special education and related services. A re-evaluation procedure consistent with the Education for the Handicapped Act is one means of meeting this requirement.	Re-evaluation as required by P.L. 94-142 is an acceptable procedure.
84.36 Procedure Safeguards	
A recipient shall establish and implement, with respect to actions regarding the identification, evaluation, or educational placement of persons who, because of handicap, need or are believed to need special	Each recipient may establish its own system for insuring procedural safeguards. Procedural safeguards (Sec. 615 of Education for the Handicapped Act) provisions as

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
instruction or related services, a system of procedural safeguards that includes notice, an opportunity for the parents or guardian of the person to examine relevant records, an impartial hearing with opportunity for participation by the person's parents or guardian and representation by counsel, and a review procedure. Compliance with the procedural safeguards of Section 615 of the Education of the Handicapped Act is one means of meeting this requirement.	stated in P.L. 94-142 are an acceptable alternative. Establishment of state-wide due process procedures may make it easier for state education agencies to monitor local education agencies' compliance. Training in interpretation of the Family Education Rights and Privacy Act and in monitoring its implementation may be necessary.
84.37 Nonacademic Services	
(a) General	
(1) A recipient shall provide nonacademic and extracurricular services and activities in such a manner as is necessary to afford handicapped students an opportunity for participation in such services and activities.	Restructuring and planning for extracurricular and nonacademic services may be necessary to assure inclusion of handicapped in these activities.
(2) Nonacademic and extracurricular services and activities may include counseling services, physical education, athletics, transportation, health services, recreational activities, special interest groups or clubs sponsored by the recipient, referrals to agencies which provide assistance to handicapped persons, and employment of students, including both employment by the recipient and assistance in making available outside employment.	Personnel working in nonacademic and extracurricular activities may need inservice training on methods for involving and integrating handicapped persons into activities.
(b) Counseling services. A recipient which provides personal, academic, or vocational counseling, guidance or placement	School counselors may need inservice training in career education for the handicapped.

PROPOSED RULES AND REGULATIONS FOR SECTION 504--REHABILITATION ACT OF 1973	IMPLICATIONS
services to its students shall provide these services without discrimination on the basis of handicap. The recipient shall ensure that qualified handicapped students are not counseled toward more restrictive career objectives than are nonhandicapped students with similar interests and abilities.	
84.38 Preschool and Adult Education Programs	
A recipient that operates a preschool education or day care program or activity or an adult education program or activity may not, on the basis of handicap, exclude qualified handicapped persons from the program or activity and shall take into account the needs of such persons in determining the aid, benefits, or services to be provided under the program or activity.	Adequate planning for preschool and adult education programs will be necessary so as to include handicapped persons on the basis of a handicapping condition.
Subpart E--Postsecondary Education	
84.41 Discrimination on the basis of handicap shall not take place in postsecondary education programs and activities, including those relating to postsecondary vocational education, the following areas:	This is a multiple agency responsibility. The state agency may be one of several public agencies to ensure that postsecondary education programs meet the requirements of Section 504.
84.42 Admissions	
84.43 Treatment	
84.44 Academic Adjustments	

The 1973 Rehabilitation Act was step closer to providing proper educational opportunities for handicapped individuals. The major fault with this act and Section 504 was that compliance was mandated, but difficult to achieve under existing funding structure. Thus, the

enabling relationship between that Act and the subsequent P.L. 94-142 legislation is that the latter constitutes basic compliance abilities of Section 504.

In review of Section 504, Secretary of Health, Education, and Welfare, Joseph Califano, stated the following:

> The 504 Regulation attacks the discrimination, the demeaning practices and the injustices that have afflicted the nation's handicapped citizens. It reflects the recognition of the Congress that most handicapped persons can lead proud and productive lives despite their disabilities. It will usher in a new era of equality for the handicapped individuals in which unfair barriers to self-sufficiency and decent treatment will begin to fall before the force of the law. (Califano, 1977, p. 48)

Decisions in these and similar areas formed the rationale for P.L. 94-142. As Congress was in the process of creating the act, the Mathias Amendment was inserted. This amendment placed additional emphasis on the regular classroom teacher as an insurance that handicapped children were to be educated with children who were not handicapped whenever possible. The mandate of the "least restrictive environment" has been commonly called mainstreaming.

This chain of events in both the federal and state court systems explains the current focus on the regular classroom teacher in educating the handicapped and the need for teacher preparation programs to respond. One response has been a series of movements to support the restructuring of teacher education programs to assure that new teachers are trained to teach the handicapped student in the regular classroom (Corrigan, 1978). Teacher education programs, in a national network referred to as Deans' Grants, have examined skills and knowledges considered basic necessities to teachers.

The Education for All Handicapped Children Act of 1975 (P.L. 94-

142). Public Law 94-142, or the Education for All Handicapped Children Act, was signed into law in November of 1975 by President Ford. Even though this legislation was the follow-up and guardian to many other pieces of legislation, both educational and social, President Ford signed the bill reluctantly. The basic premise for his reluctance was that while this act supported previous legislation and while he and others agreed on the basic purpose of the law, "The bill promises more than the Federal Government can deliver and its good intention could be thwarted by the many unwise provisions it contains." (Ford, November 28, 1975)

No one can disagree with the basic purpose of the law, that of providing educational opportunities to the handicapped. The question asked by school officials in regard to their planning schedules and budgets is "We must do what, to whom, by when?" When projecting the implementation of P.L. 94-142 to vocational education, an interesting question develops out of the multitude of rules and regulations: "Are we doing what we ought to be doing?" (Greenwood, 1977, p. 48)

These types of questions may develop and may be generated by feelings of not wanting to change. The point is that the law exists, and it is necessary for all to make the required social, political, economic, and educational reforms to make the law work. P.L. 94-142 holds many regulations and subsequent implications of public education. A brief review of P.L. 94-142 is appropriate at this point to clearly understand the regulations and implications.

Table 1

Public Law 94-142

The Education for All Handicapped Children Act of 1975

Provisions and Implications

A Synopsis

Purpose	Implications
To assure that all handicapped children have available to them a free, appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that children's and parents' rights are protected, to assist states and localities, and to assure effectiveness for efforts.	Full service.
Definition	**General Implication**
Handicapped children include orthopedically impaired and specific learning disabilities.	
Special Education: free, specially designed instruction to meet a handicapped child's unique needs including instruction in the classroom, physical education, home, hospitals, and institutions.	Training of institutional personnel in special education administration and curriculum.
Related Services: transportation and supportive services including speech, audiology, psychological, physical and occupational therapy, recreation and medical and counseling (medical for diagnostic and evaluative purposes only) and can include identification and assessment of handicapping conditions.	Federal dollars may be used for medical or paramedical services, for diagnostic and evaluative purposes.
Free, appropriate public education means special education and related services which are at public expense, meet SEA standards, include preschool and an individualized education program.	More inclusive definition requires additional services and training efforts.

Purpose	General Implication
Individualized education program: (written statement developed by LEA representative, teacher, parents and child, when appropriate).	Training of administrators and teachers.
--child's present level of educational performance.	
--annual goals and short-term objectives.	
--specific education services to be provided.	
--extent to which child will be able to participate in the regular classroom.	
--projected date for initiation and duration of services to be provided the child.	
--objective criteria and evaluation procedures.	
--schedule for determining whether instructional objectives are being achieved (must be reviewed at least annually).	
Excess costs: costs in excess of annual APPE in LEA during preceding school year after deducting funds from Title I (ESEA), Title VII (ESEA), state and local funds expended for programs under this part or Title I, VII.	Excess cost will vary from district to district throughout the state. Administrator training.
Native language: language normally used by child or child's parents (Bilingual Education Act).	
Intermediate education unit: SEA supervised agency providing free public special education and related education on a regional basis.	Intermediate treated as LEA.

Financial entitlements and allocations of P.L. 94-142. The financial provisions of P.L. 94-142 make both the law itself, as well as former acts, significant pieces of legislation. Entitlements to

the states are based on the number of handicapped children served, ages 3-21. This number is not to exceed 12% of the total number of all children aged 5-17 in the state. Initially, funding was started (FY 1978) at $387 million and increased to a total of $3.16 billion (FY 1982).

One of the financial implications of the Act is that states are required to implement and maintain personnel and develop systems for teachers and administrators. This includes the development of pre-service and inservice activities.

Funding responsibility and formulation is quite complex. Formulation takes into consideration the relationship that exists between the federal government, state education agnecies, and the local education agency. Financial sharing is quite specific to each category, although the balance of allotments may be quite different between categories.

Eligibility, P.L. 94-142. Under the requirements of Section 612 of P.L. 94-142, in order to be eligible a state must meet specific conditions. These conditions and the general implications are found below:

Eligibility Requirements of P.L. 94-142

Requirements	Implications
(1) A policy which assures a free appropriate public education to all handicapped children.	In some cases State policy may have to be redirected.
(2) Develop a plan which meets the criteria set in 94-142 and submit the plan to BEH no later than August 21, 1975. The plan should be amended to insure that:	
(a) Full educational opportunity	

Requirements	Implications
is available to all handicapped children.	
A detailed timetable is set for accomplishing such a goal.	SEA timetable will have to meet minimum criteria of 94-142.
Description is provided of the kind and number of facilities, personnel, and services necessary throughout the State to meet the goal.	Training SEA staff in data collection procedures, needs assessment, and program planning.
(b) By September 1, 1978, availability of a free, appropriate education for all handicapped children between the ages of 3 and 18.	Full service date certain.
By September 1, 1980, all handicapped children between the ages of 3 and 21.	
Requirements do not apply to 3-5 or 18-21 population if inconsistent with State law practice or court order.	Special education programs required if public education is provided for normal or handicapped children in 3-5 age range.
(c) All children in need of special education are identified, located and evaluated.	Child find.
(d) The State assures the protection of confidentiality of personally identifiable information.	Training in interpretation of Buckley amendments and implementation of guidelines.
(e) Amendments to State plan shall be available to public 30 days prior to when the plan is submitted to Commissioner.	SEA must make plan a public document.
(3) State must set priorities for service to handicapped children:	
(a) Handicapped children not receiving an education.	Child find and initiation of new services.
Handicapped children with the	

Requirements	Implications
most severe handicaps within each disability area receiving an inadequate education.	Inservice training of administrators and teachers in education of the severely handicapped.
(4) Each LEA will maintain, review, and revise as needed, but no less than once yearly, an individualized education program for each handicapped child.	Requires that LEAs have a written individualized edutional plan for each handicapped child at the beginning of each school year which would be reviewed at least once yearly. SEA would be required to evaluate the individualized educational plans in accordance with criteria established with the U.S. Commissioner of Education.
(5) (a) State has established procedural safeguards.	
(b) State assures that handicapped children will be educated with nonhandicapped children to the maximum extent appropriate.	Training in process of least restrictive environment--mainstreaming.
(c) State assures that nondiscrimination testing practices are in force.	Culturally biased tests will not be considered valid.
(6) SEA will assure that all educational programs for the handicapped, including program administered by any other State or local agency, will be under the general supervision of the SEA and will meet SEA standards.	Educational programs for the handicapped within state government but out of SEA authority must meet SEA standards. Provisions may conflict with state law.
(7) (a) State will assure that procedures are established for consultation with individuals concerned with education of the handicapped, including handicapped individuals.	
(b) Prior to adoption of policy, an opportunity for public comment and hearings will be available with adequate notice	Training in procedures for SEA personnel.

provided for such a hearing.

(Education for All Handicapped Children Act, 1975)

This review of P.L. 94-142 has included the purpose, definitions, financial entitlements and allotments, and eligibility requirements. Other regulation sections include the state plan, application guidelines for the local education agency, procedural safeguards, judicial review, and evaluation criteria.

The Education Amendments of 1976 (P.L. 94-482). Public Law 94-482, or the Education Amendments of 1976, was passed for purposes of extending and supporting the Higher Education Act of 1965, to extend and revise the Vocational Education Act of 1963, and for other purposes. Included in the wide range of state purposes are assisting states in improving planning in the use of all resources available to them for vocational education.

Within the statute of P.L. 94-482, the purposes are explained initially in very general terms. Appearing in Title I, Vocational Education, Part A, Section 101, we find the following:

> It is also the purpose of this part to authorize Federal grants to States to assist them--
> (1) to extend, improve, and, where necessary, maintain existing programs of vocational education,
> (2) to develop new programs of vocational education,
> (3) to develop and carry out such programs of vocational education within each State so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of homemaking), and thereby furnish equal educational opportunities in vocational education to persons of both sexes, and
> (4) to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full time basis,
> so that persons of all ages in all communities of the State, those in high school, those who have completed or discontinued their formal education and are preparing to enter

> the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.
>
> (P.L. 94-482, 1976, 90 Stat. 2170)

Provisions of P.L. 94-142 for the vocational educational needs of the handicapped specifically pertain to the following:

(a) Vocational advisory councils having special knowledge, experience, or qualifications with respect to the special educational needs of physically or mentally handicapped persons. (Section 105, 18)

(b) Development and adherence to a state plan which is congruent with federal guidelines. (Section 105, d3)

(c) That the funds used for purposes of Section 110(a) and consistent with the State plan submitted to Section 613(a) of the Education of the Handicapped Act. (Section 106, 10)

Included in the provisions of P.L 94-482 are mention of financial support to states for the vocational education of the handicapped. In general, local districts should apply to the state agency responsible for the distribution of such funds. In this regard, P.L. 94-482 may be referred to as a financially enabling law to the earlier legislation of P.L. 94-142.

Additional Implications for Schools

The Education for All Handicapped Children Act identifies the regular classroom as the "least restrictive environment" unless another setting is prescribed as more appropriate to meet a child's special needs. If other settings are used, they must be fully justified. Corrigan states the following:

> The implications of using regular classrooms are enormous, not the least of which is that all educators--teachers, counselors, administrators, and other support personnel--must be educationally prepared to work with handicapped persons. This calls for a change in roles of all education personnel, particularly special educators who will join and share their expertise with instructional teams as well as students... (Corrigan, 1978, p. 12)

On the topic of individuality and labeling, Corrigan further indicates:

> American schools must be based now on the principle of "no rejects"; every human being has a right to be treated as a person--not an object, or a symbol on a chart, or a category in a student grouping structure. The labeling and classification of children, and the social stigma that this labeling produces, must be eliminated...
>
> The individualization requirement calls for a continuous progress reporting system with diagnostic profiles describing each student's human variability, exceptionality, and intellectual-personal growth. However, the current marking system and the illegitimate comparisons it makes, the pressure it creates and the failure it produces, must go the way of all outmoded practices. It will do little good to place children with handicaps in regular classrooms and flunk them or deny them a high school diploma based on standardized competency tests. (Corrigan, 1978, p. 12)

The Education for All Handicapped Children Act calls on educators to "reaffirm some fundamental premises of American education" (Corrigan, 1978, p. 14). The implications are that all children have a right to an educational experience that enables them to develop to their fullest potential.

As the preceding statement applies to education in general, it also applies to vocational education. Through appropriate vocational education opportunities handicapped students will be able to develop job market skills that will enable them to be self-supporting, contributing members of society.

It is, therefore, the responsibility of parents, teachers, and school administrators, as well as the community, to facilitate the

mandate of Public Law 94-142, thus utilizing a human resource to its fullest potential.

CHAPTER III

WHAT ARE THE HANDICAPS?

A DESCRIPTION

CHAPTER III

WHAT ARE THE HANDICAPS? A DESCRIPTION

Introduction

When the term "handicapped individual" is mentioned to the layman, it usually brings to mind a vision of a painfully distorted or severely retarded individual. While there are handicapped individuals whose handicaps are severe or profound enough to be very noticeable, most are not. The apprehension that many classroom teachers have is that the severely or profoundly handicapped student is going to be placed in their classroom. The fear of having to deal with the severely handicapped child in the regular classroom should be viewed as unrealistic. In most instances, it is not appropriate to place severely or profoundly retarded individuals with teachers who do not have proper professional preparation. For the severely handicapped student, special services outside the regular classroom will be provided. Information in this chapter will review the nature and characteristics of a variety of handicaps that may be encountered in a public school classroom.

Categories of Handicapping Condition

When classroom teachers and administrators discuss what a handicapped student is a great deal of confusion often exists. The Vocational Education Amendments of 1976 (Public Law 94-482) set forth a rather clear-cut delineation of the term "handicapped" as it applies to students in secondary programs:

"Handicapped" means

(a) a person who is:

(1) mentally retarded,
(2) hard-of-hearing,
(3) deaf,
(4) speech impaired,
(5) visually handicapped,
(6) seriously emotionally disturbed,
(7) orthopedically impaired,
(8) other health impaired person or persons with specific learning disabilities,

(b) who, by reason, of the above,

(1) requires special education and related services,
(2) cannot succeed in the regular vocational education program without special education assistance, and/or
(3) requires a modified vocational education program.

(U.S. Federal Register, October 3, 1977, 42, 53864)

Many federal laws and mandates work in conjunction with one another. This is the case with Public Law 94-482, the Vocational Education Amendments of 1976, and the preceding Public Law 94-142, the Education for All Handicapped Children Act of 1975. Under the auspices of the Education for All Handicapped Children Act of 1975 (Public Law 94-142), eleven handicapping conditions are officially recognized. This act also provides specified guidelines for the assessment and placement of handicapped students. The evaluation procedures are explicit and require the following:

(a) Tests are provided and administered in the student's native language and validated for the purpose for which they were used.
(b) Tests are administered and selected to best ensure that the skills of a student with a sensory or physical impairment are reflected rather than the student's sensory or physical limitations.
(c) No single test shall be used as the sole criterion for placement.
(d) A multidisciplinary team or group of persons including the classroom teacher(s) or other specialist with knowledge of the disability.

(e) Student to be assessed in all the areas related to the suspected disability including, when appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status and motor abilities.

(U.S. Federal Register, May 4, 1977, 42, 22682)

It is difficult, if not impossible, to develop clear-cut standardized descriptions of a given set of handicapping conditions. There are general and specific characteristics for each handicapping category, as well as the case of each afflicted individual whose severity does not always permit descriptive standardization.

The purpose of this handbook is to present clarifying information for the classroom teacher, administrator, and parent that will enable those individuals to more effectively work with the special education staff of the individual school district. A specific detailed or clinical review of handicapping conditions would not be of great value in this document. Special education personnel have access to descriptive and evaluative information that will enable those specialists to make evaluative judgements or to make referrals of students for specialized testing.

For purposes of general information, it is appropriate to present the definitions of handicapping conditions as presented in the context of Public Law 94-142.

Table 2

Definitions of Handicapping Conditions under

Public Law 94-142

Handicapping Condition	Definition
Deaf	"Deaf" means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplication, which adversely affects educational performance.
Deaf-Blind	"Deaf-blind" means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind children.
Hard-of-Hearing	"Hard-of-hearing" means a hearing impairment, whether permanent of fluctuating, which adversely affects a child's educational performance but which is not included under the definition of "deaf" in this section.
Mentally Retarded	"Mentally retarded" means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.
Multi-handicapped	"Multi-handicapped" means concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children.
Orthopedically Impaired	"Orthopedically impaired" means a severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairment from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures).

Handicapping Condition	Definition
Other Health Impaired	"Other health impaired" means limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.
Seriously Emotionally Disturbed	"Seriously emotionally disturbed" is defined as follows: the term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affect educational performance: (a) an inabilitiy to learn which cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.
Specific Learning Disabilities	"Specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfuntion, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.
Speech Impaired	"Speech impaired" means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's emotional performance.
Visually Handicapped	"Visually handicapped" means a visual impairment which, even with correction, adversely affects educational performance. Partially seeing, blind.

(Source: U.S. Federal Register, Aug. 23, 1977, 42478-9)

As noted, information concerning the placement of handicapped students into regular or special programs is gathered from a variety of sources. No single test or evaluative measure will be used to make placement determinations. Decisions about placement should be made on the basis of what program would be most appropriate for the student in the least restrictive environment. The least restrictive environment is defined as follows:

> ...procedures to assure that, to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped, and that special classes, separate schooling, or other removal of handicapped children from the regular educational environment occurs only when the nature of severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily...
>
> (U.S. Code, Title XX, Sec. 1412 (5,6)

Before appropriate and accurate evaluations can be made about handicapping conditions, it is necessary to gather sufficient information about each individual to be evaluated. Some of this information is presently available within the school system and some must be provided from special evaluative testing provided in the local district or contracted for from outside sources. Vasa and Steckelberg indicate the following as primary sources of handicapped student evaluation information:

Table 3

Procedures Utilized in Obtaining Information About Handicapped Students

Source	Use
Standardized Achievement Tests	Comparative data with performance of other students
Individual Intelligence Tests	Indication of student's potential compared to other students
Observation in Classroom	Important to compare with student's performance on standardized tests. Substantiate the need for intervention
Adaptive Behavior Scales	Comparative data with the social, emotional, and self-help skills of other students
Interviews	Indication of views of others toward the student and information about how student functions in other environment, e.g., home
Health Records	Information about the student's vision, hearing, and physical health
Parental Interview	Behavior and health history, developmental data, parents' views of student's problems
School Records	Status of student's functioning in academic and vocational classes, attendance, educational history, etc.
Work Samples	Indication of student's functioning in applied school/work placement

(Meers, 1980, p. 83)

The important factor in placement of handicapped students is that their best interests are taken into consideration. Administrative or instructional convenience in planning the individual education program for the specific student should not be a primary concern. It is important that there be services necessary to serve the handicapped student based on the severity of the conditions and the necess-

ity for separate programming to meet the student's needs.

Incidence of Handicapping Conditions

Contrary to common misunderstanding and belief, vast numbers of handicapped students are not enrolled in the American schools. During the school year 1977-1978, 3,777,106 students were served in programs for school-aged handicapped children. This number encompasses 7.36% of the total enrollment in the public schools for that school year. It is estimated that approximately 2.3 million potentially handicapped students were not receiving special education services during that same time period. Table 4 provides a breakdown of the percentage of handicapped students (by handicapping condition) served and their percentage of total school enrollment.

Table 4

Percentage and Number of School Age School Population by Handicapping Condition

	Percentage of Total School Population	Number Served*
Speech impaired	2.39	1,226,957
Learning disabled	1.89	969,368
Mentally retarded	1.84	944,909
Emotionally disturbed	0.56	288,626
Other health impaired	0.27	136,164
Orthopedically handicapped	0.17	88,070
Deaf and hard-of-hearing	0.17	87,144
Visually handicapped	0.17	35,688
Total	7.36	3,777,106

*The figures are for the school year 1977-1978.
(Source: U.S. Department of Health, Education, and Welfare, Office of Education. Progress toward a free appropriate public education: a report to Congress on the implementation of Public Law 94-142, the Education for All Handicapped Children Act, January 1979.

The labeling of handicapped students in terms of rigorous categories is more important as an administrative function than as an educational planning process. D. P. Hallahan and J. M. Kaufman point out the great similarities among the educable mentally retarded, emotionally disturbed and learning disabled:

> The labeling of a student as having a specific handicap generally will not provide the classroom vocational teacher with an appropriate teaching strategy. Classroom teachers ha have to do their own assessment of the specific needs of an identified handicapped student.
>
> (Hallahan et al., 1977, p. 139)

The remainder of this chapter will review the general characteristics of handicapping conditions outlined under Public Law 94-142. These descriptions will be synoptic in nature and it must be understood that a great deal of variance may exist from one individual to another. Each of the handicapping conditions will be reviewed in light of many, but perhaps not all, of the following descriptive criteria:

(a) Definition of the handicapping conditions

(b) Degree of impairment

(c) Causal factor

(d) Incidence

(e) Educational provisions (general)

(f) Vocational training and employment

It should be noted that much of the following information was obtained from the following source:

Meers, G. D. Handbook of special vocational needs education. Rockville, Md.: Aspen Systems, 1980, pp. 86-113.

Selective editing of this material has been beompleted for the purposes of this handbook.

Deaf and Hard-of-Hearing

The literature yields a number of definitions of deaf and hard-of-hearing. There appears to be no generally agreed upon use of the two terms, partially because the implications of an auditory impairment vary with the person involved and the circumstances. Each professional field involved in the study of hearing impairments classifies according to its particular specialization and purposes. In general, several dimensions of classification have emerged.

Degree of Hearing Impairment. The degree of hearing impairment has implications for the educator and is, in fact, a major component of the present Public Law 94-142 definition.

Age at Onset of Hearing Impairment. The consequences of a hearing impairment depend, in part, on the point in the individual's developmental sequence at which the loss occurs. A person born deaf, for example, faces difficulties in speech development usually not experienced by individuals who become deaf in adulthood. Individuals who become deaf later in their development have greater speech and language capacity. In classifying the hearing impaired, those individuals born dear afe often referred to as congenitally daf while those born with normal hearing but who later lose their hearing are called the adventitiously deaf.

Causal Factor. The causal factor (etiology of hearing impairment) has been divided into two types: exogenous and endogenous. Exogenous refers to all causal factors other than heredity, while endogenous includes only heredity as an etiological agent.

Location of the Hearing Impairment. The origin of the hearing problem can be divided into two types of location used extensively in medical diagnosis and treatment.

Sensory-neural is used to designate hearing loss resulting from inner ear abnormalities. This is sometimes referred to as nerve deafness, because sound does get transmitted to the inner ear but goes no further. Hearing impairment results from the failure of the inner ear to generate the proper signal; the signal is not being transmitted through the auditory nerve pathway to the brain, or it is not being received by the brain. Causes of this type of damage include meningitis, Rh incompatibility between mother and fetus, pertussis, influenza, measles, trauma, and endogenous factors.

Conductive refers to hearing loss resulting from malfunctions of the outer or middle ear, through which sound waves fail to be transmitted to the inner ear. The outer ear acts as a funnel for sound waves, while the middle ear's three tiny bones (hammer, anvil, and stirrup) transmit these mechanical vibrations from the eardrum to the fluid of the inner ear. Congenital malformations, infections, fluid in the middle ear, and bony overgrowth

in the middle ear can block vibrations before they are delivered to the inner ear. Two other common causes of conductive loss are otitis media (middle ear infection) and otosclerosis. In some instances, an individual may suffer a mixed loss of hearing, which is a combination of conductive and sensory-neural hearing loss.

Incidence. The incidence of deafness in the United States has been estimated through the National Census of the Deaf Population (NCDP) to be at 2 per 1,000 of the population for pre-deafness (deafness occurring at or before 19 years of age).

Educational Provisions. The unique educational needs of the deaf and hard-of-hearing student have long been recognized. Simple educational modifications for assisting students with mild hearing losses include assigning the handicapped student to a front row seat, facing the child when speaking, outlining lectures on the blackboard, and making assignments in writing. The hearing-impaired student's most crucial need is for adequate communication between themselves and the teacher so as to facilitate learning. Since most deaf and hard-of-hearing students experience problems in acquiting expressive language, adequate communication involves both receptive and expressive language components.

The most common measure utilized to improve the deaf student's ability to acquire language skills is the provision of devices that amplify sound and educational programs that provide training in lip-reading (also called speech-reading) or manual sign language. Amplification is achieved through hearing aids prescribed and fitted by trained professionals. Children are now being fitted with hearing aids at very young ages to allow them to grow up in a "hearing world" and to experience the benefits of auditory learning. Education in speech-reading and manual sign language is provided in most communities by colleges, vocational training centers, and universities.

The educator must be aware of the degree of hearing that a student possesses in order to make proper adjustments in the curriculum and learning environment. In cases where students have been identified as hearing impaired or deaf and Individual Educational Programs have been developed, professionals who are trained to work with the hard-of-hearing should be available to provide guidance. Services for the hearing impaired and deaf students extend the full spectrum of the cascade of services for all special needs individuals presented earlier in this chapter.

Vocational Training and Employment. Based on data from the NCDP, it has been estimated that the proportion of prevocationally deaf people in the labor force is about the same as that for all persons. Approximately 80 percent of the general population of males and 44 percent of the general population of females are in the labor force, while approximately 83 percent of the NCDP's sample of deaf males and 49 percent of its sample

of deaf females are in the labor force.

Schein makes the following statements about the employment of the deaf:

> "In terms of personal income, deafness strikes hard. Average earnings fall 16% below the general average."
>
> "Female deaf persons do less well than male. Deaf women have higher rates of unemployment than women in general."
>
> "In economic terms, deafness is more expensive. Additional expenditures of necessary appliances, extra travel because of inability to use a telephone, and the inability to negotiate freely within the marketplace place a burden on the deaf."

Many deaf people, however, may be working at jobs requiring far less education than they have and could be considered underemployed.

The vocational curriculum of the deaf and hard-of hearing student in the high school need not be different from that designed for the hearing student. Individual differences in talents and intelligence exist among those suffering from hearing impairments, just as they do among those who have normal hearing. In providing for the vocational education of the hearing impaired student, the instructor needs to make adjustments similar to those for other students, with emphasis on the teaching strategies previously cited.

Visually Handicapped

The definition of visually handicapped centers on the performance of the student within the educational environment. The important factor is that the visual impairment limits the student's ability to function in the educational setting. A student who cannot use standard visual material in the classroom because of a lack of visual acuity would be classified as visually handicapped. In 1957, the National Society for the Prevention of Blindness defined a legally blind student as one who has a central visual acuity of 20/200 or less in the better eye after correction, or who has visual acuity of more than 20/200 if there is a field defect in which the widest diameter of the visual field subtends an angle distance no greater than 20°. The rating of 20/200 corresponds to the size of symbols on the Snellen Chart, each symbol relating to the standard distance at which a person with normal vision can comfortably read the symbol or letters. A legally blind student can, therefore, read comfortably no more at 20 feet than a normally sighted child reads at 200 feet.

The major causes of blindness are:

--Diabetic retinopathy occurs when tiny blood vessels in the retina hemorrhage due to diabetes. The result is gradual visual acuity loss.
--Cataracts occur when the lens of the eye becomes cloudy or opaque. They may occur congenitally, due to senility or trauma, or as secondary effects of other diseases.
--Retinitis pigmentosa is a hereditary disease causing loss of night vision and side vision.
--Macular degeneration results when the macula, a small area of the retina, is damaged due to inadequate blood supply causing loss of central vision.

Blindness may be either congenital or adventitious. Congenital blindness is present at birth. The adventitiously blind person becomes blind due to disease, defective functioning and shape of the eye, or trauma to the eye later in life.

Incidence. A total of 12,194 visually handicapped students were served in the public schools in 1976-1977, and that, of this number, nearly one-half were served in the regular classroom. The percentage of the total school population identified as being visually impaired in 1977-1978 was .07 percent. This figure contrasts with the more generally recognized incidence estimation of .50 percent of the population. The reason for this discrepancy may be the increase of visual impairments with the onset of aging.

Approximately 75 percent of the legally blind persons in the United States have some usable vision. Of the 1.7 million legally blind persons, 400,000 have no usable vision. In total, about 6.4 million persons in the United States have some degree of visual impairment after correction with eye glasses, contact lenses, etc.

Educational and Vocational Provisions. Educational and vocational goals for the blind student are essentially the same as those for a normal student. One goal is to provide blind students with skills that will enable them to participate in life's opportunities to the fullest extent possible. Another goal is to provide the skills necessary for them to function at the highest possible level of remunerative employment. When these two goals are achieved, the blind person becomes a self-supporting member of society.

Barriers to achieving these goals lie in two major areas. In the first area are the physical limitations imposed by the student's blindness itself. Available alternatives to sight can enable the blind student to reduce these limitations. Educationally, the adjustments are minimal in most situations; among the available alternatives are talking books, employment of readers, braille textbooks, and recent technological developments in automatic reading machines that decipher the written work placed on overhead projectors and the chalkboard.

The second area involves the attitudinal barriers established

by sighted persons. These include deiscrimination in job opportunities, lowered expectations for the blind student, and misguided compassion. These attitudinal barriers restrict the goal of normalization by reducing opportunities and by lowering the self-image of the blind student. Blind persons are capable of a much higher level of functioning than that perceived by the general public. Education beyond the normal curriculum involves training the blind student to use techniques as alternatives to sight and to develop coping skills and a positive image.

During the past decade, the number of blind persons in competitive employment has doubled. H. J. Link has estimated that employment or openings in the professional category will, in spite of increased competition, remain high, due to the development of new occupational areas. The paraprofessional category is seen by Link as the area containing the greatest number of new opportunities. Section 503 of the 1973 Rehabilitation Act, which requires businesses that provide contract work for the federal government to develop affirmative action plans for the employment of severely disabled persons, should also have an impact on the employment situation for the blind.

Link has noted the following needs in the vocational area:

--more adequate training for job placement personnel,
--more adequate evaluation of clients for employment,
--reduction of employer resistance to the hiring of the blind,
--emphasis on the training of coping and related job sharing skills for the blind client,
--use of vocational and technical schools in training blind clients.

In summary, blindness holds connotations for the general public that cause the potential of blind persons in competitive employment to be underestimated. Attitudinal change is as important to the employment of the blind as is training of adequate skills.

Orthopedically Handicapped and Other Health Impaired

The categories of orthopedically handicapped and other health impaired are treated as two distinct groups in the classfication proposed by Public Law 94-142. For our purposes, the two groups are placed in the same section, since many of the adaptations of the learning environment require similar considerations on the part of the teacher.

The definitions of orthopedically handicapped and other health impaired were provided earlier. Some of the major categories included in the classification of orthopedically handicapped and other health impaired are discussed in greater detail in the following sections.

Orthopedic Impairment.

(a) Cerebral Palsy

Cerebral palsy (CP) may result from brain damage that has occurred before, during, or after birth or from poor maternal nutrition and health. RH or A-B-O blood type incompatibility, anoxia, or birth trauma. CP refers to brain damage of the motor areas of the brain, either the cerebrum or the cerebellum, that affect motor control of certain groups of muscles.

CP has been divided into several categories depending on how it affects the child. The American Academy for Cerebral Palsy lists the various types as:

--spasticity (increase in muscle tone),
--athetosis (slow writhing movements which conflict with voluntary movement),
--rigidity (extreme stiffness and tenseness of extremities),
--atoxia (poor balance, coordination and difficulty with depth perception),
--tremor (regular and rhythmical involuntary shaking movements),
--antonia (lack of muscle tone, limpness and flaccidity), and
--mixed (combination of other forms).

Several other problems are often evidenced in combination with CP, including mental retardation, learning disabilities, emotional problems, seizures, visual impairments, auditory impairments, and speech impairments. Although these problems are of a high incidence in cerebral palsy, the affected child may have none of them.

The associated handicaps can make the CP child a less likely candidate for the regular classroom. However, it is possible that children with less severe CP involvement may be capable of functioning in the classroom. The spastic hemiplegic type, referred to above, usually manifests a higher level of intelligence but may have associated sensory impairments. The athetoid child also may have higher intelligence, while children of the rigidity type are usually severely retarded. It is evident that decisions and modifications of the educational program for the CP child must be based on the individual child's needs.

(b) Congenital Anomaly

A congenital anomaly is a birth defect in which the child is without some body appendage or with a deformed appendage, such as a clubfoot or clubhand. The anomaly may also occur in joints or in the spine. The defect may be

inherited from one or both parents or be environmentally caused.

(c) Spina Bifida

Spina Bifida is a birth defect in which the bones of the spine fail to close. As a result, a sack containing spinal fluid forms in the area of the lower back and is present at birth. The condition is usually treated surgically immediately after birth. The extent to which a disability remains can vary from little or none, to paralysis of the legs, impaired autonomic nervous system functioning, difficulties with bowel and bladder control, to lack of any sensation in the lower body. These students are usually capable of profiting from regular classroom instruction with only minor adaptation.

(d) Spinal Cord Injuries

Spinal cord injuries may result in paralysis. The area affected is determined by the level at which the spinal cord is injured. If the cord is severed between the fifth and eighth vertebra, a condition known as a quadraplegia results, in which control and sensation in the arms and everything below that point is lost. If the injury occurs below the eighth vertebra, control and sensation is lost in the legs and is referred to as paraplegia. In both of these conditions, there is usually loss of bowel and bladder control and often loss of sexual functioning. Other problems, such as physical deterioration of muscles and pressure sores from wheelchairs or braces, arise because of the paralysis and loss of sensation.

Rarely does the injury affect brain functioning. Therefore, victims of a spinal cord injury can be served in a regular classroom as soon as they have sufficient mobility to reach the classroom.

(e) Amputation

Amputation is the surgical removal of a limb or a portion of a limb. It is usually performed when tissue has been injured beyond repair due to irreversible loss of blood supply to the limb; to infections, including bone tuberculosis, cancer, and osteomyelitis; to the removal of congenital anomalies. Amputation is usually followed by the provision of a prosthetic device (artificial limb). When the prosthetic device has been fited and the amputee has been trained to use it, the individual is capable of functioning well in the regular classroom, in most vocational training settings, and in job placement.

(f) Contractures

A contracture is a permanent shortening of a muscle

due to spasm or paralysis. This term also refers to a condition of high resistance to the passive stretch of a muscle, which may result from abnormal formation of tissue surrounding a joint. A student may suffer a permanent disability or deformity due to the shortening of a muscle caused by the shrinking of damaged tissue. Minimal modifications of the regular classroom, if any, are necessary to accommodate the student with a contracture.

Other Health Impaired.

The category of other health impaired includes many medical conditions, both acute and chronic, that afflict students and adversely affect their educational progress. This section presents descriptions of several conditions with which the educator may wish to become more familiar. Not all of the health impairing conditions that the educator may encounter are included, due to the diverse nature of these conditions. However, those described will provide the educator with information that can be applied to the study and evaluation of other conditions.

Some health impairing conditions are relatively rare and may not be encountered in the classroom with any frequency. Also, it is important to remember that not all health impairing conditions are equally handicapping for the child. Some, like asthma, may involve occasions when breathing is difficult, yet for long periods between attacks there may be no obvious, observable symptoms. In contrast, other conditions, such as heart disease, may obviously affect the child at all times. The important point to remember is that the same impairing condition may vary in severity from student to student. Some students with heart conditions may participate in most classroom activities while others may exhibit marked diminution in their tolerance to the ordinary physical activities of the classroom. For children with health impairing conditions, therefore, educators should provide educational programs that are planned in light of the student's unique behavioral assets as well as their medical classifications.

(a) Heart Condition

To assist the educator in understanding medical classifications of heart disease patients, the American Heart Association Classification System is reproduced in Table 5. The table provides a view of the functional and therapeutic capacity of patients with cardiac disease, together with estimates of what their hearts will allow them to do.

As suggested by the classifications of Table 6, children with heart disease can behave in different ways and can exhibit varying degrees of disability. Children with mild heart conditions may be therapeutically unrestricted

Table 5

Functional and Therapeutic Classifications of Heart Disease

Functional Classifications

Class I	Patients with cardiac disease but without resulting limitations of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea, or anginal pain.
Class II	Patients with cardiac disease resulting in a slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea, or anginal pain.
Class III	Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the original syndrome are present even at rest. If any physical activity is undertaken, discomfort is increased.

Table 6

Therapeutic Classifications

Class A	Patients with a cardiac disease whose ordinary physical activity need not be restricted.
Class B	Patients with cardiac disease whose ordinary physical activity need not be restricted, but who should be advised against severe or competitive physical effort.
Class C	Patients with cardiac disease whose ordinary physical activity should be marked restricted.
Class D	Patients with cardiac disease who should be at complete rest, confined to bed or chair.

(Adapted from the American Heart Association Classification System in Interviewing guides for specific disabilities: heart disease. Washington, D.C.: U.S. Department of Labor, 1969.

but may be so anxious that they behave as if their disability were great. Those students whose tolerance is markedly diminished should be assisted in adjusting to their limits. G. McNutt suggests that individuals with surgically corrected, congenital heart disease should be able to function in normal vocational activities. A good rule of thumb appears to be that the student with heart problems should be pressed to the point of excessive fatigue.

(b) Asthma

Asthma is an episodic, reversible increased responsiveness of the smooth muscle walls of the lung's airways to various stimuli that results in a spasm of the bronchial musculature and the production of an excessive amount of mucus. This produces the characteristic symptoms of recurrent attacks of labored breathing accompanied by wheezing and coughing.

Asthma is an allergic condition of the lungs. Along with the asthma, the afflicted individual is inclined to exhibit other allergic problems, such as eczema, hay fever, hives, and food intolerance.

An asthmatic attack may be a frightening experience for the teacher because of the struggle and gasping for every breath, the color change, and the obvious distress displayed by the child. The attack may be brought on by a specific sensitivity to an allergen. exposure to excessive physical activity, or possibly by an emotional reaction. It is believed that stress lowers the threshold of sensitivity to an attack.

Asthma, like other medical conditions, varies in severity from child to child. In general, asthmatic children should be encouraged to join in ordinary class activities and should be treated as normally as possible. The teacher should become aware of the factors that precipitate an asthmatic attack, have information concerning the proper course of action to follow should an attack occur, and should be aware of any possible side effects or behavioral changes that may be related to the prescribed drugs being used by the students. This information can be obtained from the student's parents and physician, and assistance can be obtained from the school nurse. Generally, afflicted students will regulate themselves, and no artificial restrictions need be placed upon them. However, efforts should be made to avoid exposing such students to the substances to which they are allergic or to cigarette smoke, dust and other irritants which tend to promote broncho-spasm.

(c) Epilepsy

Epilepsy is not a specific disease but is rather a

symptom that can be produced by a various diseases, tumors, or other injuries to the brain. These injuries result in recurrent, short-lived electrical discharges from the brain, commonly called seizures. These seizures take many forms, depending on what part and how much of the brain is involved. The common types of seizures are:

--Grand mal. The grand mal is probably the most dramatic type of seizure. All the neurons in the motor cortex discharge simultaneously and the person experiences violent convulsions and complete loss of consciousness. These episodes are often preceded by a warning (aura) which may be visual, auditory, olfactory, abdominal or by other sensations that the person recognizes. The attack itself results in (1) an abrupt loss of consciousness, (2) tightening of the muscles with the body rigidly extended (tonic spasm) for usually one to three minutes, (3) jerking movements of the head, arms and legs (chronic convulsion) lasting two to three minutes, (4) a period of recovery with or without confusion, and (5) a period of sleep. The frequency of attacks may vary from one per year to many a day.

--Petit mal. This is the second most common form of epilepsy. The person experiences a sudden fleeting loss of consciousness or a change in posture or muscle tone without warning. No confusion or aberration of consciousness follows the attack. Typically, there is nothing more than a momentary gap in the person's activities with a related gap in memory. Petit mal seizures are most likely to appear before or at puberty and tend to disappear with increasing age, but in some children they progress to grand mal.

--Jacksonian. These are localized seizures, beginning in one extremity or side of the face and progressing throughout the arm or leg of the same side, often without loss of consciousness. The convulsion may spread to the other side of the body, in which case the attack becomes generalized, usually with loss of consciousness, as in grand mal.

--Psychomotor. In this type of seizure, the person exhibits behavior that is usually purposeful but not relevant to the siguation. The attacks may last for a few minutes or may go on for more extended periods. While under the seizure, the person may act as if intoxicated, may be morose and irritable and may engage in purposeless motor movements. Following the attack, the person has no memory of the incident.

An estimated .5 percent of the population is epileptic, but the condition is not apparent in these people except during seizures. Epilepsy may occur at any age, in any race,

and in both sexes. Approximately 75 percent of all epileptic seizures begin before the age of 25. Epilepsy occurs in one out of every 50 children.

Special curricular modifications are not necessary for students with epilepsy, but the teacher should be aware of the disruption of concentration and the resultant learning problems that may be created by this disruption. The teacher should also be prepared for the possibility of a grand mal seizure.

In general, the epileptic student can participate in nearly all school activities. However, the student's parents and physician should be consulted to determine if any activities should be avoided. Most children with epilepsy are well controlled on medication, have normal intelligence, and can be expected to lead normal lives.

(d) Diabetes

Diabetes is a metabolic disorder in which the insulin produced in the body by the pancreas is insufficient to utilize properly sugar and starches. In the diabetic, carbohydrate metabolism breaks down, and conversion of sugar and starches into energy or theri storage for future use cannot be accomplished as in the non-diabetic. This condition may be due either to the inability of the pancreas to produce enough insulin or to the inability of the body to use properly the insulin produced. In either case, an excess of sugar accumulates in the blood (hyperglycemia) and may be excreted in the urine (glycosuria). In severe cases, the body can no longer obtain needed energy from carbohydrates and must draw upon protein and fat as a source of strength. This usually results in a loss of weight and strength. Other symptoms include excessive thirst, excessive hunger and excessive urination.

Diabetes occurs at all ages and affects approximately 3 million people in the United States. Of these, about 4 percent have onset in childhood.

Treatment of diabetes usually includes insulin injections, dietary regulation, or both. Additionally, the right amounts of exercise and rest are important components of most treatment plans. The most effective control of the disease is obtained when a balance of insulin, diet, and exercise is achieved.

The educator should be aware of symptoms of both high and low blood sugar to assist students with diabetes in the management of their condition and to provide their physicians with information about the students' management plans.

High blood sugar can result in a diabetic coma. This

is fairly rare but can be serious if not treated immediately. This condition usually develops slowly and is serious if not treated immediately. It is characterized by dry skin, deep labored breathing, dry tongue, thirst, excessive urination, a sweet or fruity odor to the breath, and finally coma. Treatment consists of keeping the child warm and resting after immediately notifying the parent, nurse, and physician.

Low blood sugar may result from anything that may increase the child's metabolism rate, such as too much exercise, too much insulin, not enough food, or nervous tension. This is called an insulin reaction. It usually develops rapidly and is characterized by any or all of the following: pale and moist skin, a sudden change in behavior, sweating, extreme hunger, restlessness, headache, and a tired feeling. Treatment of this condition consists of providing the child with a quick energy snack such as pop, a sugar cube, candy, or raisins. If no improvement is seen within five to ten minutes, the parents, nurse and physician should be contacted. If there is doubt, the situation should be managed as a low blood sugar reaction according to one authority, since the administration of sugars will cause no harm. Each child has individual characteristic signs of low blood sugar; therefore, consultation with parents and physician may be necessary to know what to look for in that particular child.

The diabetic student can do everything the normal student does, and no restriction of activity is necessary unless specifically prescribed by a physician. Many children may need supplemental snacks, and a quick energy source should be available if a low blood sugar reaction develops.

The attitude toward employing diabetics is becoming increasingly liberal. The trend is to judge each applicant individually rather than generalize and reject all diabetic applicants. The present policy of the Civil Service Commission indicates that the Commission believes that persons with controlled diabetes may be good employees and that it is good business to hire them.

Educational Provisions

The various orthopedic impairments outlined in this section affect the physical performance of children rather than their intellectual functioning. In most--with the possible exception of cerebral palsy, cerebrovascular accidents, and spina bifida--intellectual functioning remains normal. Recently, measures of intelligence that are less dependent upon language have shown that higher levels of intellectual functioning exist even in children with cerebral palsy. After an initial period of training in self-help skills, the child is capable of functioning in a normal classroom. Frequently, however, children with severe medical problems may be absent for extended periods of time.

Special care should be taken to ensure that students have the basic tool skills necessary to do more complex tasks. The curriculum should include academic as well as career and vocational education.

Modifications may or may not be needed in the physical environment of the classroom, depending upon the particular students. For instance, if the student is using a wheelchair, doors must be wide enough to accommodate mobility. In some instances, instructional materials should be modified to facilitate handling by the student. In all but the most severe cases, or in cases of orthopedic handicaps accompanied by other handicapping conditions, the regular classroom provides the optimum setting for the orthopedically or other health impaired student.

The two major barriers to the employment of the orthopedicallv or other health impaired are attitudinal barriers and architectural barriers. Removal of these two obstructions can greatly expand employment opportunities. Removal of architectural barriers is particularly important to orthopedically impaired persons, since they have limited mobility.

With increased technology less emphasis is being placed on physical demands, and the number of suitable jobs has increased. Hopefully, under new affirmative action programs, attitudinal as well as architectural barriers will diminish.

Mentally Retarded

Mental retardation refers to a general lack of intellectual and social ability in children and adults. The definition given earlier in Table 7 is the legal definition for purposes of funding special education programs for the retarded.

The definition of mentally retarded encompasses a wide variety of individuals and a vast range of etiologies and manifestations. Among the more than 200 identified causes are the following:

--Genetic irregularities--including those inherited and those caused during pregnancy by overexposure to x-rays, infections, and other causes.
--Illness of the mother during pregnancy--including German measles, malnutrition, and glandular disorders.
--Trauma during birth--including measles, meningitis, and encephalitis.
--Glandular imbalance.
--Malnutrition.
--Accidents causing damage to brain tissue.
--Anoxia (lack of oxygen).
--Poisons.

--Understimulation (extreme environmental deprivation resulting in lack of development).

Individuals are considered retarded if their performance on separate measures of intelligence, academic achievement, and adaptive behavior are significantly below the norms of their age-mates. To be considered mildly mentally retarded, a child must obtain scores which fall at least two standard deviations below the mean in all three areas. It is recognized that deficiencies in only one or two of these areas is insufficient evidence for the classification of mental retardation. Assessment in all three areas--providing measures of functioning on tests, functioning in school and in daily functioning within the natural environment--reduces errors in evaluation. Higher functioning in one area indicates abilities not shown in the other areas of measurement and precludes classification of the child as mentally retarded.

Table 7

Identification Criteria for School-Age Mildly Mentally Retarded

Measurement Area	Measurement Tool	
Intelligence	Individual intelligence tests (e.g., WISC-R)	Full scale intelligence: 70 or less.
Adaptive Behavior	Adaptive behavior scales, observations, observation reports, developmental history, etc.	Significantly below average. Indications of slow or immature development.
Achievement	Standardized achievement scales. Classroom academic performance.	Ratings significantly below age-mates (tests 2 standard deviations below mean). Failure or near failure academically.

Retardation manifests itself uniquely among different individuals, both in terms of severity and in terms of how individuals within the same measured range of ability function. Several systems have been developed in medical and educational disciplines to classify the severity of retardation. The popular classification systems use standardized intelligence test scores in part to describe ranges of ability. The systems are used concurrently to describe either programs or individuals. Table 8 provides a summary of three popular classification systems: those of the American Association on Mental Deficiency, the American Psychiatric Association, and an educational system. It is important to note here that the functioning of specific individuals cannot be determined solely on the basis of their inclusion in one of these

classifications. The child must be recognized as an individual with a unique set of abilities and preference. As with normal children, development does not proceed along a linear continuum, and it displays considerable variability as a function of age.

The classification "profoundly retarded" usually implies severe impairment and the need for constant care. Many of the children who fall in this category require institutional care or constant care in the home; they are not capable of self-care. The classification "severely retarded" implies marked impairment in motor, speech, and language development, but the capacity for minimum independence is present. The moderately retarded or trainable individual is capable of learning self-care skills and of benefiting from training yet usually requires a sheltered environment. The vast majority of retarded persons fall in the mildly retarded or educable category. The mildly retarded person can usually be expected to obtain competitive employment and to function in daily community life.

Table 8

Three Classification Systems for Severity of Mentally Retarded

Classification System	Level	Intelligence Rating
American Association on Mental Deficiency	Profound	0-24
	Severe	25-29
	Moderate	40-54
	Mild	55-70
American Psychiatric Association	Severe	0-54
	Moderate	55-69
	Mild	70-84
Educational	Profound	0-24
	Severe	25-39
	Trainable	40-54
	Educable	55-75

Incidence. During the 1977-1978 school year, approximately 950,000 students or 2 percent of the school-age population were served in the programs for the mentally retarded. Table 4, presented earlier, showed that approximately 90 percent of the mentally retarded students were served in the regular classroom and separate classes, while only 10 percent were enrolled in separate facilities and other educational environments.

A majority of the mentally retarded fall within the mildly retarded range of ability. This is demonstrated by the fact that, in 1976, approximately 40 percent of the identified mentally retarded were receiving a portion of their educational program in

the regular classroom. This supports the contention that vocational educators probably are already serving the mentally retarded in their classrooms.

Educational Provisions. Since mental retardation includes such a wide variety of etiologies and symptoms, an inclusive definition, by necessity, lacks specific reference to remediation or educational approaches. The standardized tests used to determine classification are used only for comparisons to normed populations and give no information pertaining to the child on a noncomparative basis. Use of classification should be limited to studies of incidence, prevalence, and so forth, and as a means of receiving appropriate special services for the child.

Educational services are typically provided through a continuum of levels of service. These levels range from little or no modification of the regular vocational classroom to basic self-care and occupational therapy in a hospital setting. Table 9 represents various alternatives in vocational education programming available to the mentally retarded student. Decisions about placement of students at various levels are based upon information gathered and evaluated for that particular student. The placement decision is based upon the individual needs of the particular student rather than on broad classifications of severity. Within this continuum, the regular classroom represents the least restrictive alternative and is chosen whenever possible.

As can be seen from the incidence figures in the previous section, the vast majority of mentally retarded students (90 percent) are served in a special class or less restrictive alternative. Educational modifications for these students may include additional emphasis on core and components, opportunity for additional practice and over-learning, special materials for low reading ability and increased hands-on experience. The prevocational and vocational curriculum for the mildly mertally retarded student may also include greater emphasis on personal and social skills, daily living skills, and career information often acquired incidentally by nonhandicapped students.

Since mildly retarded students generally do not go on to other education, work experience and placement have assumed growing importance as roles of vocational programs in secondary schools. These functions, as well as coordination with other services such as vocational rehabilitation, are designed to ease the transition from the school environment to the work environment.

In considering a mentally retarded person for employment, such factors as education, training, job experience, motivation, attitude, personality, and general health should be considered along with I.Q. scores. The sole use of I.Q. scores in determining placement may underestimate the potential of the student for employment. Many retarded persons are capable of obtaining jobs in the competitive employment market. With proper training,

Table 9

Alternatives in Vocational Programming for the Mentally Retarded

Least Restrictive	Regular vocational program	Regular vocational programs may fit the needs of some mentally retarded students with little or no modification.
	Adapted vocational program	Regular programs are adapted to meet the special needs of students who cannot succeed in regular vocational programs. Adaptations may be in materials, course content, supervision, working style, etc.
	Adapted Vocational program plus remedial services	These programs provide remedial education in basic computational and quantitative skills, communication skills, work attitudes and habits, personal social skills, occupational information, and/or prevocational evaluation as a prerequisite to success in an adapted or regular vocational program.
	Special vocational education	Self-contained voational programs offer services not possible in a regular vocational classroom and are open only to handicapped students.
	Special vocational schools	Schools may be established solely for the purpose of vocational education of the handicapped. Usually physically removed from the regular school setting. Basic emphasis on prevocational skills and entry level job skills.
	Sheltered workshop	These provide supervised work and training for those individuals not capable of engaging in competitive work experiences. Workshops may or may not be in conjunction with school programs.
Most Restrictive	Vocational training in institutional setting	These vocational programs are offered as part of the total educational program in an institutionalized setting.

mentally retarded persons have been employed as general office clerks, messengers, office persons, mail carriers, stock clerks, sales clerks, domestics, day workers, housekeepers, nursemaids, nurses' aides, laborers, construction workers, welders, carpenters' helpers, filling station attendants, metal workers, upholsterers, and in many other responsible positions. A positive approach to vocational education and job placement, which means concentrating on what the retarded person can do, greatly improves the chances of achieving competitive employment.

Seriously Emotionally Disturbed

The seriously emotionally disturbed category of handicapping conditions can be seen to be one that, even in Public Law 94-142 form (Table 10), is composed of a complex and multifaceted array of symptoms. Use of the P.L. 94-142 definition reveals certain characteristics of the emotionally disturbed student that are associated with impaired educational performance. In many cases, such children exhibit maladaptive behaviors that interfere with learning. They may be unable to build or maintain satisfactory interpersonal relationships with others. Also, they may be generally depressed, possess physical symptoms or fears, exhibit inappropriate behaviors and feelings, or possess schizophrenic or autistic symptom patterns.

Behaviors which the emotionally disturbed child could display include the following:

--explosive temper outbursts,
--hostile aggression toward others,
--extreme withdrawal and lack of involvement with others,
--depression and apathy in situations most students enjoy,
--unreasonable beliefs about others, such as conspiring against someone,
--loss of use of some bodily function (for example, sight or hearing) with no medical explanation, and/or
--extreme unrealistic fear of ordinary environmental objects.

The above list is not exhaustive but rather representative of some of the problems presented by the emotionally disturbed student. A number of variations in intensity and duration of the problems will be noted.

The identification of the emotionally disturbed child is usually the province of psychiatric and psychological specialists. Recommendations for treatment come from these specialists and from teams of educational specialists. In the screening process, the first step in identification of emotionally disturbed and behaviorally disturbed children is to determine if their behavior and actions in the classroom interfere with one or more of the following: (1) the learning of other students, (2) their own learning, or (3) the effectiveness of the teacher.

When one of the above three conditions occurs, the student has a behavioral problem significant enough to indicate a need for intervention on the part of the teacher. When the problem cannot be alleviated within the regular classroom by the teacher without assistance, a referral is made to the appropriate specialist designated in the school, often the special education resource specialist. Based upon data gathered from observations in the classroom, test data, and clinical data, the student would be judged either a simple discipline problem, behaviorally disturbed, or emotionally disturbed. The classification of emotionally disturbed is based primarily on the premise that the behavior noted has occurred over a period of time, that it is not a reaction to a specific stressful situation, and that it is of sufficient intensity to cause concern on the part of the staff. The decision for placement in a program for the emotionally disturbed would be based then on the duration and intensity of the behavior problem.

Incidence. Estimates of the incidence of emotional disturbance in the United States vary considerably because the definition used, the population sampled, and the identification methods employed differ from one investigator to the next. However, Table 4, presented earlier, suggests that .50 percent of the school age population needs intensive special education. Gearheart and Weishshn have utilized surveys conducted by several agencies to estimate the number of emotionally disturbed children in 1978 as 1,100,000 with 15 percent of this number currently receiving service and 85 percent remaining in need of service.

Educational Provisions. In many cases, emotionally disturbed children can function in the regular class with certain behavioral adaptations. They can benefit from regular placement in situations where they are able to observe appropriate behavior and see that they are regular members of society and that they are able to function in a milieu that fosters academic pursuits but is still safe and somewhat protected. Other students may receive special services in the school and participate in regular classes on a part-time basis; still others may receive psychiatric of psychological assistance while participating in regular classes. In all cases, however, the educational placement and programming should be consistent with least restrictive environment provisions of Public Law 94-142 and be appropriate for that child.

There are various approaches in working with emotionally disturbed students in the classroom, but none would be endorsed by most experts as the "correct" method. One system emphasizes the acceptance of inappropriate sysmptoms, followed by tolerance but not acceptance, and finally by limit-setting. Another approach involves acceptance of the child's behavior and reflection of the behavior back to the students. Still another stresses provision of understanding, acceptance, recognition, and clarification of feelings. In contrast to these acceptance philosophies, there is an approach that utilizes systematic procedures to change or modify inappropriate behaviors and to encourage

appropriate behaviors. Regardless of the approach, there are many constructive steps that can be taken to provide a realistic responsible environment for the emotionally disturbed student.

The educator should be cautioned about making generalizations about the emotionally disturbed student. The intensity of the presenting problem of individual students varies on a continuum of total withdrawal to extreme hostility. Since the presenting problems vary in symptomatology, intensity, and duration, the intervention strategies, training programs, and employment potential must be based on knowledge of the particular student.

Vocational programs and especially vocational programs for the handicapped have traditionally included training in work habits and attitudes as well as in personal-social skills as components of training and job success. The Vocational Educational Amendments of 1976 include training in personal-social skills as a component of their definition of vocational instruction. These areas are of primary importance to the emotionally disturbed student, both in vocational training and in future job success.

As in other handicapping conditions, one of the greatest barriers to employment is the attitude of the general public concerning emotional disturbance. Since emotional disturbance is not generally well understood, it often elicits unwarranted apprehension on the part of potential teachers and employers. Vocational educators have the job of preparing both the student and the potential employer to deal with this apprehension.

Specific Learning Disabilities

The present area of learning disabilities is an integration of three historically separate fields. Until the 1960's, disorders of spoken language, written language, and perceptual and motor processes were viewed as separate areas of interest.

During the sixties, these disorders were integrated under the label "learning disabilities", although the three theoretical approaches are still evident in the many definitions and remediation techniques. Because of the vast scope of the field, a behavioral working definition of the learning disabled (LD) student has not evolved.

Within the current definition of learning disabilities under Public Law 94-142, the major characteristics of the learning disabled student are delineated below:

--a discrepancy between the student's intellectual level and his/her achievement in specific academic areas,
--does not originate from physical disabilities, such as blindness, deafness, or physiological factors,
--students' intellectual ability is within the average to

above average range of functioning,
--poor academic achievement resulting from mental retardation, emotional disturbance, or environmental, cultural or economic disadvantages are excluded.

Various authors have attempted to further define the descriptive characteristics of LC children. One author, Thomas Jeschke, surveyed teachers working with LD students and identified the following ten characteristics that were frequently observed among such children: hyperactivity; perceptual disturbances; language difficulties; specific learning disorders in reading, arithmetic, writing, and spelling; coordination disorders; disorders of attention; impulsivity; memory problems; low frustration tolerance; and poor self-concept.

Other authors have differentiated children by the area of disability and by learning channel defects. The choice of classification system and the extent of its use is dependent upon the user's orientation and goals for the utilization of the classification system in remediation of the learning disability.

The procedures and criteria followed in the identification of the LD student are presented in Table 10. In the identification process, a multidisciplinary team composed of classroom teachers, local educational agency personnel, and individuals trained to administer individual tests seek information in the following areas: physical, emotional, and enviornmental factors; intellectual ability; achievement; and observation of classroom behaviors to make decisions about whether the student is learning disabled.

Incidence. Since "learning disabilities" is an umbrella catagory and could encompass students with mild to severe difficulties, it is possible that a large percentage of the school-age population could be defined as belonging in this category. In general, two percent is an appropriate guideline. In fact, in the original legislative actions under Public Law 94-142, a temporary lid of two percent was placed on the number of students who could be labeled "learning disabled" for funding purposes. This temporary lid was removed after the publication of the identification procedures in November, 1975. In the school year 1977-1978, slightly less than two percent of the school-aged population in the United States was being served in programs for the learning disabled. It should be remembered, however, that the incidence figures vary from state to state depending on the rigorousness of the criteria used for identification.

Educational and Vocational Provisions. A number of models or methods of delivering services to the learning disabled adolescent are in existence. For the purpose of convenience in describing the various approaches, they have been grouped into five categories: (1) traditional special education, (2) tutorial, (3) survival skills, (4) career education, and (5) composite. The models are presented briefly in Table 10 along with

author's comments about the strengths or weaknesses of each. These models, all of which are used in one form or another in school systems in the United States, demonstrate the widely differing purposes, approaches, and philosophies involved in the education of the learning disabled.

Table 10

Identification of Learning Disabled Students

Criteria	Learning Disabled	Non-learning Disabled
Physical, emotional and/or environmental factors	Vision, hearing, physical abilities, emotional stability, cultural/economic conditions not primary factors in school failures	Sensory impairments; physical disability; emotional disturbance; environmental cultural or economic disadvantages present
Intellectual ability	I.Q. greater than one standard deviation below the mean	I.Q. less than one standard deviation below the mean
Achievement	Elementary: Achievement test scores more than two years below present grade placement in: oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, math calculations, and/or math reasoning Secondary: Scores two years below grade placement and below seventh grade in at least one of the seven areas listed above	Achievement test scores below present grade placement in all areas
Observations	Observation data indicate lack of self-management skills; behavior which interferes with own or others learning primarily due to frustration in learning	Observation data reveal severe behavior problems and inability to manage self and surroundings
Classroom achievement	Data indicate sporadic or no progress toward goals	Date indicate steady progress toward goals
Meets above criteria	Identification of LD. Placement in LD program.	Alternative solution sought

Table 10 (cont.)

Models for Delivery of Services to the Learning Disabled Adolescent

TRADITIONAL SPECIAL EDUCATION	Description This model is an extension of the self-contained special classroom. The approach revolves around an emphasis on specific skill acquisition and remediation of academic or process deficits. The program can either be an integral part of the school program or can easily operate as a separate entity with little integration with the regular program. Comment Frequently, the program lacks continuity with the total school curriculum, places insignificant emphasis on career-survival skills, and requires the LD student to be isolated from the mainstream of the school.
TUTORIAL	Description This model is designed to permit the LD student to compete in the regular school program with assistance of support personnel. Alternative instructional procedures to master content are provided to the student. Major emphasis is one-to-one tutoring or small group instruction with the LD specialist. Regular liaison between the classroom teacher and the LD specialist or tutor is required to accommodate the LD student. Comment Positive attributes include: continuity of the educational program for the LD student; opportunity for students to succeed in regular school program; opportunity for regular teaching staff to alter teaching procedures to accommodate the LD student. Weaknesses include: the students are obligated to adjust to the school curriculum, rather than the curriculum being adjusted to the unique needs of the students. The model can also be expensive to operate.
SURVIVAL SKILL	Description This model is frequently used in conjunction with other models. The emphasis is on assisting the LD student to develop coping skills and response patterns to meet the demands of the instructional program. Activities could include: test-taking skills and teacher-pleasing behaviors. The goals are to teach

Table 10 (cont.)

self-management, assertiveness, and basic student skills. The program can be delivered on a tutorial or small group basis.

Comment

When carried to an extreme, the model may be providing students short-term skills which have little value in later life. Students who have developed survival skills will be more likely to be successful in the public school.

CAREER EDUCATION

Description

The purpose is to permit realistic planning for the "world of work". The model is often organized in three areas: daily living skills; personal-social skills; and occupational and career guidance. The approach provides experiences for the student related to assumptions of acult roles. The instructional components are generally delivered throughout the curriculum, with work experiences on either a simulated or actual placement basis as a culmination of the process.

Comment

A career education component can be excellent as a part of the total program; however, caution is needed to insure that LD students are not prematurely directed to occupational choices that may not be commensurate with their potential. If emphasis is placed on career preparation, LD students may be encouraged to make occupational decisions based on their weaknesses rather than abilities.

COMPOSITE

Description

The model is composed of three parts: self-management instruction; basic academic skill instruction; and career-survival skill instruction. The model differs from the others in the amount of emphasis placed on each component. Basic academic instruction is provided on a tutorial or small group basis only to enable students to make progress. When little or no progress is noted, compensation skills are taught. Self-management instruction allows students to become responsible for their behaviors and their environments. Career-survival skills instruction extends through the first three stages of career education: awareness, exploration, and orientation. The emphasis is placed

Table 10 (cont.)

on skills that are important for success in the "world of work".

Comment

This model has the advantages of each of the previous models and takes into consideration the whole student. The weakness of the model is the pressure placed on the LD specialist to provide the program. The teacher in the model has to have a broad base of trainirg expertise as a teacher and consultant.

Speech Impaired

Speech impairment refers to those students who have difficulties with oral language. The educational/legal definition was given earlier in Table 2. Most students, especially in kindergarten and primary grades, at one time or another have difficulties with speech, particularly with articulation and syntax. These difficulties are not considered a speech impairment unless they deviate substantially from the speech patterns of the students' peers. The speech impaired student presents a picture that is not congruent with the predictable developmental patterns observed in the majority of students.

J. Eisenson and M. Ogilvie have pointed out several communication problems that are often confused with speech impairment. These include: (1) nonstandard pronunciations and language usage, (2) regional dialects, (3) poor oral reading, (4) immature articulation and fluency patterns, and (5) psychological disturbances that are manifested as speech symptoms.

Speech impairment may be observed separately or in conjunction with other handicapping conditions. Several other conditions --such as deafness, cerebral palsy, and mental retardation-- have a high incidence of related speech problems.

In general, speech problems fall into several categories based on the type of difficulty encountered. These include articulatory defects, stuttering, vocal defects, retarded language development, cleft palate speech, oanguage impairment, cerebral palsy speech, and speech defects due to impaired hearing.

(a) Articulatory Defects

The most common types of speech problems are articulation defects. These may include errors of omission ("bo" for "boat"), errors of substitution ("wabbit" for "rabbit"), errors of dis-

tortion ("nother" for "mother"), or errors of addition ("puhlease" for "please").

(b) Stuttering

Stuttering is characterized by involuntary stopping, the rapid repetition of certain sounds, or the prolongation of a sound. Stuttering varies in its frequency of occurrence and in its debilitating effects.

(c) Vocal Defects

Vocal defects are defects of pitch, intensity, quality, and/or flesibility. Pitch is important when it is inappropriate to the age or sex of the individual. Intensity may be too loud or too soft, in either case interfering with normal communication. Quality problems include breathiness, harshness and nasality. Flexibility problems are characterized by the monotone speaker.

(d) Retarded Language Development

For most children, language development follows a predictable pattern. Some students who may have had a delay in language onset exhibit language more infantile than their peers. This may include limited vocabulary and simpler sentences, as well as speech omissions and infantile pronunciation of words. The important consideration here is that the lag in language development is outside that normally expected in similar children.

(e) Language Impairment

Language impairment is usually associated with some type of brain damage. It includes students who have difficulty in the acquisition of language and also those who have difficulties from brain damage that has occurred after the acquisition of language. The first type is often included in the category of retarded language development.

(f) Cleft Palate Speech

Cleft palate speech is caused by an opening in the hard or soft palate that allows air to pass between the nose and the mouth. This results in an impaired ability to reproduce consonants that require a build-up of air and gives speech a nasal quality.

(g) Cerebral Palsy Speech

Defects in articulation and thythm are caused by impaired motor functioning resulting from brain damage. Detailed information on aspects of cerebral palsy was provided earlier in the section on orthopedic and other health impairments.

(h) Speech Defects Due to Impaired Hearing

Speech is largely learned and regulated through hearing and limitation. Impaired hearing is often accompanied by speech problems in articulation, voice, and intensity. Depending on the onset of hearing loss and compensation, the development of language itself may also be impaired.

Incidence. Usual estimates of the incidence of speech impairments range from 2.5 to 5.0 ;ercent of the school age population. Table 4 indicated, however, that 2.39 percent of the school-aged population were served as speech impaired during the 1977-1978 school year. Speech impairment as a handicapping condition affects the greatest number of students, comprising 35.2 percent of those served as handicapped. The American Speech and Hearing Association has reported that 75 percent of speech clinicians work at the kindergarten, first, and second grade levels and that only 2 percent work strictly at the high school level, indicating that the prevalence of speech problems is much higher in younger children. Approximately 90 percent of the speech impaired students were served in regular classrooms; less than 2 percent were served outside the school system.

Educational Provision. Remediation of speech impairment is usually the domain of the speech clinician (who is also known in some areas as the speech pathologist or the speech therapist), but the classroom teacher is often a valuable adjunct as a provider of services and a referral source. When the child is being seen by a speech clinician, the teacher should consult with the clinician to jointly design a classroom program that complements the clinician's therapy. An additional valuable service provided by the teacher is in the correct modeling of articulation and language usage. Referrals to speech clinicians are a teacher responsibility; such referrals may become necessary when the child has generally unintelligible speech, severely delayed speech, dramatic voice changes other than those ordinarily present during puberty, debilitating stuttering, or other speech impairments that adversely affect the child's educational performance.

(Meers, Handbook of Special Vocational Needs Education. Aspen, 1980.

Summary

The preceding collection of information reviews in a general fashion the most common of handicapping conditions which may likely be found in a special-needs population in any given school district. This listing is not to be considered complete or thoroughly definitive. It does, however, offer information which may be useful for educational planning.

CHAPTER IV

ATTITUDES

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ATTITUDES

Introduction

Many practicing teachers have the basic skills needed to be successful classroom teachers of handicapped children, e.g., a practicing knowledge of educational foundation, subject matter and curriculum. Following these, the characteristic most needed is that of constructive teacher attitudes toward the handicapped student. Teacher attitudes are formed over years of experience as pointed out by special educator Eileen Brady:

> The attitudes of teachers today have been strongly influenced by the low visibility of handicapped individuals in the past. The stress on education for the exceptional child has been slowly increasing over the years. However, many teachers have not been involved in this phenomenon. This lack of experience must not hinder the opportunity for special children to take advantage of their own potential in least restrictive educational environment. (Brady, 1977, p. 9)

Probably the greatest barrier to handicapped students is the attitude barrier. Teachers can assist in the reduction of attitude barriers by leading their classes with a proper and positive attitide toward the handicapped students.

It must be recognized that attitudes of teachers toward working with special-needs children are to a large extent formed prior to the students' admittance to the classroom setting. It is therefore necessary to provide teachers with accurate and positive information and skill experiences before their involvement with special-needs learners.

Definition of Attitude

It may be stated that attitudes are more readily measured than defined. This statement would appear accurate upon examining the numerous definitions of attitudes brought forward by various experts in the field of sociology, psychology and education. Attitudes may be described as tendencies to act, mental disposition, mental state of readiness, learned processes, and a way of being set toward or against certain things. In every definition there exists a common element--attitudes are predeterminates of behavior, not behavior in themselves. Attitudes exhibit a readiness to respond to a given situation or set of situations (Fender, 1979, pp. 11 & 12).

Emotion plays an important role in reinforcing existing attitudes and/or in changing those attitudes. These emotions are related to the degree of pleasant or unpleasant experiences. These emotions are related to the degree of pleasant or unpleasant experiences. The emotions exhibited by classroom teachers when handicapped students enter their classroom often depend upon whether or not the teachers' prior experiences with handicapped individuals have been pleasant or unpleasant.

An additional variable affecting the regular classroom teachers' emotional state is how each teacher perceives the handicapped students' role in regard to specific teaching goals and objectives. Strong negative emotions may be developed if classroom teachers perceive the handicapped student as a hindrance to their teaching success or as an additional burden. It may be noted that the added responsibility of increased planning time and the extra effort needed to keep the handicapped student involved in regular classroom activities is a

negative attitude factor in mainstreaming handicapped students.

Another component of attitude formulation is behavior. This refers to behavior of the teacher toward the handicapped students. The formation of any behavior involves perceived ideas about what is correct behavior toward any group and is the predisposition to any action. The behavioral component may simply be viewed as a reaction to the handicapped individual. Either a positive or negative reaction or an individual who seeks experiences with the handicapped versus one who avoids those experiences may be observed.

Attitudinal components have a specific relationship. The cognitive component of an attitude is the minimum condition required for the existence of the attitude. Some basic knowledge of a situation must exist for the development of an attitude. A teacher with absolutely no knowledge or awareness of handicapped students or their educational implications, however unlikely, would not be expected to possess an attitude concerning their inclusion into the regular classroom. When that awareness, knowledge, or experience is gained, it will usually be associated with one or more pleasant or unpleasant events or the attainment of desirable or undesirable goals. The nature of the experience will provide the teacher with an emotional response to the handicapped student. The emotion evoked is the basis for the affective component of attitudes. Both the cognitive and affective components of an attitude will lead a regular classroom teacher to a state of predisposition to a specific action concerning the handicapped students. When this occurs, an attitude is formed.

In relationship to regular classroom teachers and handicapped students, a developmental pattern of attitude cultivation can be

traced. Certainly the amount of awareness, knowledge, and experience that regular classroom teachers have had prior to a "mainstreaming" experience will affect their attitudes. It is not enough, however, to depend upon general awareness if one desires a positive attitude to develop. The quality of knowledge and experience provided to regular classroom teachers must be considered. Prior teaching experience with handicapped students has been reported as being an important factor in the development of positive attitudes. The change of attitudes will be examined later in this chapter, but the level and accuracy of knowledge that teachers receive concerning the handicapped, combined with a positive teaching and personal experience with handicapped individuals, appear to be integral elements in the creation of positive attitudes.

Once the initial cognitive attitude level is achieved, teachers will develop a set of emotions toward or against handicapped students based upon the results of their experiences. It is logical to assume that if the experiences were pleasant and rewarding, did not create additional professional burdens, and/or were accompanied by a sufficient amount of educational services and administrative support, then the emotions evoked would be positive in nature, or at the very least, not negative to a degree that the teachers would resist the opportunity to work with handicapped students in their classroom.

If, however, the knowledge acquired by teachers about the handicapped was inaccurate or misleading or the initial experiences unpleasant or created additional educational burdens which were not accompanied by sufficient special services or administrative support, then the teachers' emotions would probably be negative.

Teachers who have experienced that type of "mainstreaming" could not be expected to welcome additional handicapped students, nor would they be strong advocates of the "mainstreaming" concept. In fact, teachers who have negative experiences with handicapped students, for whatever reason, can become strong opponents to any additional efforts to "mainstream", even if the initial negative factors are removed. These teachers become unintentional prime sources for misinformation and misconceptions for new teachers who are yet to experience their first handicapped student. The behaviors of teachers, therefore, are established based upon a combination of knowledge, experience and interaction with other individuals. These experiences can theoretically be all positive or all negative, however, the usual situation is for them to be a combination of both. To further understand how behaviors are developed from attitudes, it is necessary to briefly examine the functions of attitudes.

Functions of Attitudes

As identified by Triandis (1967), attitudes have four major functions:

(a) Attitudes exist to assist individuals in organizing and simplifying an enormous set of complex inputs coming from their environment.

(b) Attitudes aid in protecting an individual's self-esteem by making it possible to avoid unpleasant truths about themselves.

(c) An individual can maximize the rewards gained from his environment if his reactions to certain world complexities are based upon the correct attitudes.

(d) Attitudes allow individuals to express their fundamental values.

The function of attitudes is to express the fundamental aspects of individuals' personalities. The development and expression of attitudes provide predictability within a very complex environment.

In terms of the handicapped student, it is natural to want to categorize that individual so that a general set of behavioral reactions can be chosen from instead of having to develop and decide upon individual reactions for individual students. Educators universally accept the concept of the "normal" student and possess a repertoire of behaviors to apply to that set of individuals. It is not uncommon, therefore, to expect classroom teachers to attempt the same procedures for handicapped students. In fact, in special education those categories with their own general educational expectations have been established and in existence for years. Labels such as mentally retarded, learning disabled, cerebral palsy and others have precategorized students.

The danger in using such labels is subtle but very real. The risk in general is that the category in which the student is placed may not, in fact, be correct. However, it is human nature for teachers' perceptions of qualities to be affected by their prior expectations. Therefore, students might be placed in a category, erroneous expectations be placed upon them, and, regardless of their subsequent behaviors, be judged rightfully placed by that teacher. In so doing, teachers can protect their self-esteem by avoiding uncomplimentary truths about themselves. If handicapped students can be categorized and deemed to possess a certain cognitive, psychological, or physical quality which precludes their inclusion into the regular classroom, then teachers may be able to hide the fact that they are uncomfortable in the presence of a handicapped student or, in some way, feel inade-

quate in their abilities to meet individual needs of any student (Fender, 1979, p. 13).

In a similar vein, if teachers can educate only one type of student, the "normal" student, and concentrate their efforts in developing an educational set of behaviors (lesson plans or teaching techniques), then certainly the probability of success or the continuation of attainment of some goal is increased. However, if a student enters the educational environment whose characteristics do not follow the established set of educational behaviors, then the teachers are faced with a choice of either experimenting until a new education behavior is discovered or insisting upon using the established behaviors regardless of the consequence. (In either situation the probability of success or goal attainment is diminished and probably the teacher feels threatened.) It is in this educational setting that it is essential to provide teachers with additional special educational supportive services to insure the probability of success in teaching the handicapped child.

The functions of attitudes, as with the definitions, are therefore complex. People possess a wide variety of concepts concerning any particular subject or person. Those concepts represent a combination of experience, perceptions, knowledges, and beliefs. Those contributing variables do not necessarily represent a compatible network. They may be distortions of reality and can even be in direct conflict with one another.

Attitudes are inferred by how an individual relates to another person or object. In making this statement one might assume that behavior and attitudes are strongly related. However, while a relation-

ship does exist, the strength of the relationship is questionable. It must be remembered that behavior is dependent upon many other variables, only one of which is attitude. Often behaviors reflect what people think they should do, not their attitudes concerning their action. Teachers may accept or reject working with handicapped students based on what they think they should do or what is expected of them by their superiors and/or peers, not upon their attitude toward that student. An individual teacher's behavior may be dictated by habit, other social norms, or expected consequences of their behavior.

Educators are faced with the situation that attitudes are extremely important to the integration of handicapped students into the regular classroom environment but are difficult to define, and are affected by many variables. It is therefore necessary to provide teachers with adequate and accurate information pertaining to all aspects of dealing with the handicapped student in order to influence the development of positive attitudes.

Factors Affecting Teacher Attitudes

Despite the difficulty noted by various authors to agree upon a definition of attitude, there have been numerous attempts to determine the factors involved in the formation of teachers' attitudes and the effects of those attitudes in the mainstreaming process.

Varify and Corls (1979) examined a number of variables affecting the attitudes of teachers toward handicapped students. In their examination they determined that fixed environmental variables such as classroom size, school size, and the type of school community have little or no effect on teacher attitudes. There was, however, a tendency for teacher attitudes toward the handicapped to become more

negative at higher grade levels due to mind sets held by teachers toward "normal" student achievement. This study revealed that factors contributing to positive teacher attitudes were as follows:

(a) the teachers' perceptions of their own success in dealing with the handicapped student, and

(b) the level and quality of administrative support received and the availability of support services.

(Varify et al., 1979, p. 18)

How teachers determine their chances for success in integrating the handicapped student into the regular classroom setting is dependent upon additional factors. These factors will be discussed below.

Administrative Attitude and Support. The attitudes of teachers are often a reflection of the attitudes expressed by the administration of the individual school or district. A number of indicators reflecting administrative attitudes have been identified:

(a) The location of special education classes and resource rooms should be as desirable as those facilities for nonhandicapped students.

(b) Access to curricular and extracurricular activities--art, music, physical education, and intramurals--should be provided.

(c) The academic progress of students with severe learning problems and other specific handicapping conditions should receive equal recognition with their higher achieving peers.

(d) Absolutely no handicapped child should be excluded from receiving an appropriate education due to the financial cost of a special program.

The attitude toward the handicapped in an individual school or school district is set by the administration of that unit. The attitude via administrative action and/or policies will be a key factor in the attitudes formed and educational practices utilized by the teachers employed in that district.

Labeling of Handicapped Students. The relationship of the labeling and classification system used with the handicapped by teachers and the attitudes that result from that system have been a concern of educators for years. Hobbs addressed the effect of labeling on the handicapped in the following manner:

> Categories and labels are powerful instruments for social regulation and control, and they are often employed for obscure, covert, or hurtful purpose: to degrade people, to deny them access to opportunity, to exclude "undesirables" whose presence in some way offend, disturb familiar custom or demand extraordinary effort. (Hobbs, 1974, p. 11)

People almost instinctively react negatively to those who are different. Individuals are often ill at ease with the handicapped or otherwise different individual.

It is an accepted standard that labeling, for educational purposes, is done in the best interest of the child. In reality, however, convenience or cost are often the deciding factors in labeling and the educational placement of a student.

The classification or labeling of handicapped students serves to identify them as stigmatized and, therefore, as threatening individuals. "The use of labels serves to increase the psychological distance between threatened individuals and the child who is the original source of the anxiety" (Hobbs, 1974, p. 13).

Hirshoren and Burton (1979) examined teachers' willingness to integrate handicapped children into the regular classroom and found that labeling and severity of involvement had an effect also. It was determined that the more severe the condition the less likely a child would be welcomed into the regular classroom. Children labeled as retarded were also less likely to be accepted as were children with behavioral problems. Even children with more severely involved ortho-

pedic, behavioral, auditory, and vision conditions were identified as more acceptable than mentally retarded children. This was interpreted to indicate that regular classroom teachers may have had attitudes reflecting limited encounters and/or stereotypic concepts concerning handicapping conditions. Teachers appeared to feel that the lack of intellectual ability is a far greater handicap than behavioral or sensory and physical handicaps. This also could reflect a general lack of understanding of the educational implications of the handicapping conditions. The labeling process which exists in the educational environment contributes significantly to the determination of teachers' attitudes. Labels placed upon children's conditions often take the place of children themselves. Instead of referring to "John's educational problems", one often hears comments concerning the "retarded's", the "C.P.'s" or the blind child's problems. Gross and often inaccurate generalizations can pass from child to child just because they have been grouped under broad special education headings or labels. This immediate identification of differences can often predetermine children's success before they even arrive in the regular classroom. Turnbull and Schultz (1978) concluded that it is imperative that individuals be described with educationally relevant terms--levels of performance, learning styles, and educational strengths as well as weaknesses that exist--instead of depending on one general label. As was noted by Steward in the following comment:

> The labeling process and its effects go beyond affecting the preconceived attitudes of the regular classroom teacher. As already implied, attitudes can and do affect many other variables which influence the handicapped children's success in the regular classroom. Labeling appears to be one variable which has had a negative effect on the attitude of the regular classroom teacher. (Stewart, 1979)

Worthiness and Self-Concept. The attitudes of classroom teachers toward specific handicapped children has direct implications in the following areas:

(a) How those children feel about themselves.

(b) How other children feel, interact, and accept them.

(c) The actual performance of the handicapped child in the regular classroom.

A relationship exists between teacher attitudes and the behavior and performance of the handicapped child.

Self-concept, or how one feels about oneself, is a very strong element in everyone's life. For the handicapped child, it can play an even more important role. Self-concept is a learned phenomenon; therefore, it can be influenced, changed and modified by happenings in the environment. Often the classroom teacher serves as a "mirror" by which the handicapped children view themselves. The quality of interaction between the classroom teacher and those handicapped children will reflect the teacher's attitude, level of acceptance, and true feelings toward them. That interaction will not be interpreted by the child as a judgement of the worthiness of that teacher, but a self-judgement of the value of the child. To handicapped children whose lives have been filled with frustration and failure, a negative reflection from a classroom teacher can only add to the many problems which exist for them. On the other hand, a positive reflection can influence not only the self-concept of the handicapped child but can directly influence the attitudes of and acceptance by the other children in the classroom.

There are several variables which are related to the interaction of handicapped children and their nonhandicapped peers that affect the

self-concept of the handicapped child; these are as follows:

(a) Communication

(b) Success

(c) Respect

(Turnbull and Schulz, 1979, p. 95)

If nonhandicapped children have not been influenced by adult attitudes toward the handicapped, most children are naturally open and honest in their initial communication with handicapped individuals. Open communication must be fostered and continued in all classroom situations.

Every individual with a handicapping condition may not want to discuss it or choose to answer questions freely. This must be predetermined by interacting with the individual, the parents, and former teachers of that individual. In some cases, class discussions may precede the integration of the handicapped individual. It must be stressed again, however, that an atmosphere of acceptance of individual differences must exist well before a handicapped child enters. Teachers must recognize that all children have specific strengths and weaknesses which are totally unrelated to the identified handicapping conditions. To avoid addressing those strengths and weaknesses is detrimental to everyone involved in the educational process. All children will benefit eventually if strengths and weaknesses are addressed and openly accepted. One must keep in mind that children with handicaps will be asked questions about their condition all their lives. One aspect of a sound psychological adjustment to a handicap is accepting the weakness concomitant to the condition and establishing the strengths that continue to exist. An honest and open approach in communication can facilitate that process.

Depending upon the particular handicapping condition and the environment in which an individual exists, a lack of success may be quite prevalent. Success is important for all individuals. It contributes to many attitudinal aspects of life, self-concept, self-confidence, the willingness to attempt new and difficult tasks, and the ability to cope with failure. An individual who experiences nothing but failure will become one who can eventually develop severe emotional and psychological problems. It must be remembered that children are trapped in an academic environment with little choice as to whether they wish to remain. Continued failure, coupled with the inability to escape or avoid the situation which facilitates that failure, will often create a student who rebels in one way or another. Rebellion can manifest itself in inappropriate behaviors, physical disruption of classes, or psychological withdrawal. Thus, success must be an integral part of the academic environment for all children.

Expectations of Handicapped Children

Success, for the handicapped student in the classroom, can be both teacher-determined as well as student-determined. Success can be related to teacher expectations for academic accomplishment by specific students. Just as labels may influence teacher attitudes, the same labels and attitudes may affect the success of the handicapped student in academic matters.

Lower academic expectations are often associated with children who are labeled with certain handicapping condition descriptions (Gillung and Rucker, 1977). There are several ways that lowered student expectations are communicated by teachers to students who are viewed as lower ability achievers. Special education researchers

Brophy and Good (1974) indicate the following behaviors of teachers toward students who are perceived as being lower achievers due to a handicapped label:

(a) Teachers exhibit a tendency to wait a shorter amount of time for these students to respond to questions.

(b) The children are criticized more often.

(c) The children receive less praise for appropriate behavior.

(d) The children receive less feedback for their efforts.

(e) These students are called upon less often during periods of classroom participation.

(f) These children may be physically placed further from the teacher than students identified as having higher expectations.

Teachers must recognize that such subtle, often unconscious, interaction may exist. It is natural for teachers to want to spend more time with students of higher achieving levels,. to reward their educational progress, and share in their achievements. Realistically speaking, this is one way by which teachers receive positive feedback for their preparation and commitment to education. It must also be remembered, however, that the higher achieving students will receive numerous chances for success during their education experience. Children with lowered abilities, or perceived lower abilities due to labeling, will usually have fewer opportunities for success. Teachers therefore must guard against the chances for success of the handicapped student being reduced by teacher behavior.

Teachers may examine their behavior toward students through various formal and informal means. In general, teachers can assess their expectation level of a student by examining their attitude toward that handicapped student:

(a) Have expectations for the handicapped student changed as additional information about the student was gained and interaction increased?

(b) Does an atmosphere exist in the classroom that permits all students to make mistakes without fear of penalty?

(c) Are honest, positive comments always given in regard to a student's effort?

(d) Are tasks asked of students based upon individual abilities or are all students expected to perform the same task at the same rate?

It must be recognized that teacher expectations are not always detrimental as long as expectations do not become static and inflexible. Students are in a constant state of change and development, and expectation about them must reflect those changes.

Teacher expectation of students can take on many other characteristics. Teachers may exhibit an excessively solicitous attitude in their interactions with handicapped students due to an overly sympathetic reaction. It is not uncommon for individuals who feel an extreme amount of sympathy for any handicapped student to exhibit behavior which pampers or overlooks obvious strengths of that student. Emotional immaturity is not an uncommon trait among handicapped children, and, too, parents of handicapped children often foster defensive traits in reaction to emotions and stressful situations. It is, therefore, unrealistic to think that there would never be a teacher who did not expect less from a student in a wheelchair or demand less from a visually or auditorially impaired student.

The key to developing the appropriate attitudinal approach toward educating the handicapped student is individual interaction of teachers with those students. When this interaction takes place, teachers will be able to examine their positive and negative characteristics and feelings toward the handicapped student. When attitu-

dinal strengths and weaknesses are realized, steps can then be taken by teachers to formulate operationally positive attitudes toward the handicapped student.

Changing Attitudes

It has been noted that public school personnel charged with the responsibility and opportunity of working with the handicapped student in the regular classroom may have a less than positive attitude toward that group of students and that change. It has also been noted that one of the major reasons for a positive attitude about mainstreaming, integrating the special-needs learner into the regular classroom, is a lack of knowledge about this group of students held by those teachers. Negative attitudes, anxiety, and even fear are natural reactions when faced with a unfamiliar situation. Classroom teachers and administrators must take the lead in developing positive attitudes toward the handicapped students, since these students will be a part of our regular classroom population.

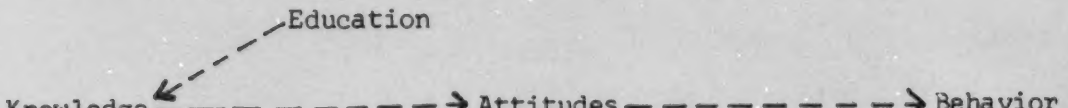
Changing attitudes is not an easy task. There are various methods that may be utilized singly or in combination. Of major importance is the role of education and the broadening awareness of teachers about the handicapped individual. While not the entire answer to gaining a positive attitude, education or an increased awareness is a beginning as was stated by special education theorist J. C. Swanson:

> The assumed role of education in behavior change has been to give the process a "push" to initiate the information gathering process. This process will than produce some attitude shifts and finally induce behavior modification. (Swanson, 1972, p. 363)

Swanson illustrates the process of attitudinal change through

education in the following diagram:

Education and the Change of Behavior



(Swanson, 1972, p. 363)

It is recognized that education alone is not the answer to attitude change. Of great importance is familiarity on a firsthand basis; familiarity with an object often leads to liking it. Psychologist Fritz Heider (1958) in synthesizing works of other psychologists states the following:

> Familiarity alone seems to engender positive valuing on the part of the individual. While the influence of familiarity is not simple and can also lead to dislike, it may be used to develop positive attitudes.

By accepting the ideal that education and familiarity may be the keys to developing or reinforcing positive attitudes in teachers who work with the handicapped, it is than possible to provide several means of operationalizing education and familiarity. At this point it should be noted that even though education about and familiarization with the handicapped are important, activities designed to facilitate these ideals should be realistic in terms of effort and time required of the teachers.

Techniques for Changing Attitudes. An examination of literature reveals that regular classroom teachers show a consistent pattern of methodology when dealing with handicapped students. These methods, all variously labeled, center around five major activities of teachers in dealing with handicapped students as a group:

(a) Direct and indirect contact,

(b) Provision of information,

(c) Handicapping condition simulation,

(d) Group discussions, and

(e) Psychodynamics of prejudice.

While teacher-centered, these activities include support and direction from school administrators, handicapped education specialists and consultants, legal advisors, and parents, as well as the handicapped individuals themselves.

It should be noted that these methods of attitude change vary in their degrees of effectiveness. Due to extraneous factors and the past experiences of the teachers involved, no one single method may be pointed out as being more effective than another. Realistically, several methods may be needed to cause a noticeable attitudinal change in teachers concerning their perceptions of the handicapped. With the use of any of these methods, it must be remembered that "attitudes are improved by an attitude object being associated with a rewarding state of affairs; or a person may behave in a way that is frequently followed by positive reinforcement (Fender, 1979, p. 23).

DIRECT AND INDIRECT CONTACT

Activities which would bring teachers and handicapped individuals together, either for direct interaction or indirect observation by teachers of the handicapped individuals interacting with nonhandicapped individuals, are important. It should be noted that direct interaction should be structured to permit teachers' relating to handicapped individuals of approximately the same social level and age. This is necessary for the free exchange of questions and information. This

interaction may take place in formal informative meetings or within the framework of informal social gatherings. This technique may be very effective in establishing an ease of rapport. This is essential because many classroom teachers have never been in social contact with the handicapped.

PROVISION OF INFORMATION

This technique may be most effectively used in conjunction with others. Simply, it is designed to provide teachers with descriptive information about various handicapping conditions. Without "real life" situations to relate information to, much of the effectiveness is lost in unfamiliar terminology and description. A direct connection needs to be established between handicapped conditions, information, real individuals, and the classroom situation.

HANDICAPPING CONDITION SIMULATION

This has proven to be one of the most effective means of bringing about attitudinal changes (Donaldson, 1977, p. 339). When used in a structured workshop setting, the simulation of certain handicaps by teachers gives those teachers a new or broadened appreciation for many disabilities. While somewhat limited to the physical handicaps, this method gives "able-bodied" teachers an appreciation of physical limitations and their effect on educational achievement.

GROUP DISCUSSION

Discussion structured for teachers who are facing the challenge of teaching handicapped children may be very helpful in developing positive attitudes. It is important to note that discussions should be led by individuals who are specialists in handicap education.

Furthermore, these discussions should be led with purpose and direction, and not permitted simply to "ramble" about the topic. It should be noted that often discussions without definite and assertive structure serve to strengthen stereotypic opinion held by discussion group members. Therefore, such discussions could serve to strengthen negative attitudes rather than to create positive attitudes.

PSYCHODYNAMICS OF PREJUDICE

Another form of discussion group technique, the psychodynamics of prejudice approach, attempts to get at the core of negative attitude formulation. This technique should be used only by the trained psychologist with small groups of teachers who wish to examine their deep-rooted negative attitudes toward the handicapped. This technique, due to its format, will have limited applications.

Summary

The preceding methods are presented as examples of several means by which teachers may improve their attitudes concerning their interaction with the handicapped student in their classrooms. While many teachers are eager and willing to accept the mainstreamed handicapped child, positive attitudes toward those children are essential to their continued learning progress and acceptance by their peer groups. It is, therefore, necessary to constantly guard and monitor teacher attitudes since a change in positive attitude may impede the overall educational and social progress of the handicapped child.

CHAPTER V

WHAT SHOULD BE DONE WITH THE HANDICAPPED IN THE VOCATIONAL CLASSROOM?

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Introduction

As teachers, administrators, and parents of special-needs students have faced the challenge of providing educational opportunities for these children, a very important question has continually arisen. What do we do with the special-needs learner in the regular or vocational classroom setting? In answer to this question, industrial education specialist Dale Messerschmidt indicates:

> What do we attempt to do with special education students in vocational education? The answer is relatively simple. We attempt to fulfill the usual goals started for that area of vocational education. (Messerschmidt, 1976, p. 3-4)

This statement embodies the essence of P.L. 94-142, that of providing the handicapped with as normal an educational experience as possible.

The social and educational atmosphere which is created in our public schools should be a reflection of those social situations which handicapped and nonhandicapped individuals will encounter outside of the school. Educational experiences should be a training ground for the handicapped.

It is the purpose of vocational education to prepare students to meet the skilled, professional, and social demands of the world of work. When appropriate, vocational education opportunities should be made available to the handicapped individual. The means of providing vocational education opportunities for the handicapped student in the public school realm is through mainstreaming into regular vocational programs.

Mainstreaming

The term "mainstreaming" has been associated with the process of integrating the handicapped student into the regular classroom setting. Like many other terms which have been coined or associated with intensive educational movements, this word--mainstreaming-- is often misinterpreted.

Mainstreaming is placing handicapped students in regular classes with their nonhandicapped peers to the maximum extent appropriate. In very simple terms, the major purpose of mainstreaming is to help handicapped students. Both in educational literature and in individual state and local district practice, mainstreaming is open to many ambiguous interpretations. For this reason, mainstreaming has meant classroom confusion to many educators who have tried to carry out practices and mandates. In an effort to clear up some of this confusion, it is appropriate to review what mainstreaming is not as well as what it is.

What Mainstreaming Is Not.

(a) Mainstreaming is not the wholesale elimination of special education self-contained classes.

(b) It does not mean that all handicapped students will be in regular classes.

(c) It does not imply that those handicapped students who are placed in regular classes will be in that setting the entire school day.

(d) Total mainstreaming is not an arrangement that can be accomplished overnight in a school system. Instant change often leads to threatening and unstable classroom environments.

(e) Mainstreaming is not just the physical presence of a handicapped student in the regular class.

(f) Mainstreaming does not mean that the placement of handicapped students in regular classes creates jeopardy for

the academic progress of nonhandicapped students.

(g) Mainstreaming does not mean that the total responsibility for the education of handicapped students placed in regular classes will fall to the regular classroom teacher.

(h) Mainstreaming does not mean putting educators "out on a limb" and expecting them to accomplish tasks for which they are not prepared.

(Turnbull and Schulz, 1979, p. 52)

The above listing creates a basis for what mainstreaming is and what this activity tries to accomplish for the benefit of the handicapped student. If mainstreaming is going to work, students must be evaluated and appropriately placed in whatever educational setting that is determined to be proper for their educational needs.

What Mainstreaming Is. The following section will explain not only what mainstreaming is, but will also indicate the roles that teachers, administrator, and students must carry out for successful implementation.

(a) Mainstreaming is the creation of new and different educational alternatives for handicapped students rather than the elimination of alternatives. Educational programs should emphasize individuality by including various options for the student depending upon particular needs.

(b) When handicapped students are placed in regular classes, they often need various types of support services. Handicapped students might be in a regular class for a portion of the day and a resource room or special class for the remainder of the day. A resource room is an educational setting that provides assessment services and remedial instruction to handicapped students on a regularly scheduled basis for a portion of the school day. (Wiederholt, 1974)

The special education teacher who assumes responsibility for instruction in the resource room is referred to as the resource room teacher. The special education self-contained class in most schools provides a more permanent educational arrangement as a resource room. Rather than moving back and forth for specified periods of time between the regular and special class, students may receive the majority of their instruction in that

> setting. In many school systems, mainstreaming has resulted in the transition of many former special classes to resource room programs. Rather than eliminating special education, the resource arrangement has the distinct advantage of being more accessible to regular teachers and their classrooms.
>
> (Turnbull and Schulz, 1979, p. 53)

Many educators erroneously believe that the state and federal laws pertaining to handicapped students require that all handicapped students be placed in regular classes.

(c) To be successful, mainstreaming must be an ordered, systematic, step-by-step process of integrating older handicapped students, formerly segregated in special classes, and younger handicapped students into regular programs. Many school districts have expected that the mainstreaming process will place in a short period of time. A great deal of planning must accompany successful implementation.

(d) Those wishing to mainstream handicapped students must realize the importance of refining the mainstreaming system before students can be successfully integrated or mainstreamed utilizing the system. Many tasks should be accomplished prior to placement of students into the system such as the following:

(1) Needs assessment,
(2) Development of a systematic plan,
(3) Inservice training of personnel,
(4) Acquisition of resources,
(5) Coordination of services and personnel, and
(6) Development of evaluation procedures.

(Paul et al., 1977, p. 46)

(e) Mainstreaming is the social and instructional integration of handicapped students into regular classes. This means more than the physical presence of the handicapped students in the classroom. The development of peer social relationships is as important to the educational process for both handicapped and nonhandicapped students as the academic processes that take place. Students will observe one another and learn to cope with strengths and weaknesses of each group.

Instructional integration will take place when handicapped students are involved in the curriculum of the classroom. This occurs when appropriate instructional strategies are used to instruct students in individual, small group, and large group activities.

(f) If the classroom atmosphere is appropriately structured and the teacher is skilled in a variety of classroom individualized instruction techniques, there should be no basis for concern that the presence of handicapped students will impede the academic progress of nonhandicapped students. If specific instructional or behavioral problems arise, those problems should be analyzed and corrected.

(g) When handicapped students are mainstreamed into the regular classroom, nonhandicapped students stand to learn a great deal from handicapped classmates. Individuals never learn to respect differences until they are exposed to them and have an opportunity to cope and gain information.

Mainstreaming--A Shared Responsibility

When confronted with the situation of providing educational opportunity for handicapped students in the regular classroom, many teachers balk. The perception which many have is that the major responsibility for this task will fall on their shoulders. While the classroom teacher is the chief liaison in the system, the overall responsibility is and must be a shared one.

The day-to-day operational concept of shared responsibility is an important one to understand. The failure of the mainstreaming effort in many school systems may be attributed to the placing of too much responsibility for all aspects of the program on the shoulders of the regular classroom teacher. In most instances, regular classroom teachers have not had the specialized training and experiences necessary for them to cope with the full range of educational, physical, and mental handicaps which may be present in the classroom. A sound approach to mainstreaming requires shared responsibility on the part of all educational personnel in the school system.

School districts will vary in number and type of staff members as well as in administrative structure. It is important, however, to

review the responsibilities of those educational personnel who may contribute to the mainstreaming effort. These responsibilities and individuals are reviewed by Turnbull and Schulz (1979) below:

(a) Regular Teachers

Classroom teachers of the regular grades will undoubtedly be called upon to assume major responsibility in the mainstreaming process. As they teach handicapped students for a portion of the school day or in some cases for the entire day, they will coordinate the student's instructional and social integration which is the essence of mainstreaming. Often it is classroom teacher who is the focal point for marshaling the resources to implement the individual education plan effectively. Since such a large portion of mainstreaming requirements occurs in the regular classroom, it is very important for these teachers to know from whom help can be expected. The following briefly outlines responsibilities that might generally be expected to be shared with other mainstreaming team members. These suggestions are offered as a general guide and must be adapted to the particular staffing pattern of each school.

(b) Resource Teachers

Many handicapped students in regular classes receive individual or small group instruction from a special education resource teacher. Handicapped students may leave the regular class to receive instruction in the resource room for a specified period of time each day or each week, or the resource teacher may come into the regular class and instruct the handicapped student in his everyday setting. To insure maximum educational progress, resource and regular teachers need to coordinate their programs carefully and maintain close communication relative to the student's performance. The individual education plan is the curriculum and instructional guide; however, as the plan is implemented, information between or among teachers needs to be shared. Regular teachers can expect the resource teacher to give them suggestions on instructional techniques and curriculum adaptations that are appropriate for the student when he is in the regular class. Some resource teachers are assigned to work with students having only one type of educational handicap, such as learning disabilities. Many school systems are moving toward the plan of having "noncategorical" resource teachers--teachers who are not restricted to working with only a particular diagnostic group of students. The function of a resource teacher is to do just what the job title implies: to serve as a resource to the handicapped students and classroom teacher. Regular teachers are encouraged to take advantage of this assistance. Asking for help is no sign of weakness; rather it is indicative of concern and conscientiousness.

(c) Itinerant Teachers

Itinerant teachers usually function in a manner similar to resource teachers. They are considered to be itinerant as they travel from one school to another and usually work with individual students on a regularly scheduled basis. This model is usually followed in sparsely populated areas or in schools that have too few handicapped students to justify a full time resource teacher.

(d) Self-Contained Class Teachers

Special classes are one alternative in the full continuum of educational services for handicapped students. These classes typically serve students with substantial handicaps who may not be appropriately served in regular classes. The teacher of this class has the job responsibility of working with handicapped students in the self-contained class setting and also integrating these students into school activities and curriculum blocks as appropriate. Although self-contained class teachers usually do not have the consultative duties of the resource or itinerant teacher, they do readily share instructional suggestions and materials with regular teachers in many situations.

(e) Special Education Consultants

Larger school systems often employ a special education consultant whose job might be to provide inservice training to classroom teachers and to offer backup support to classroom, as well as resource, teachers. The consultant usually has advanced training and is knowledgeable about a variety of instructional strategies. Systems which do not directly employ a consultant are likely to have consultative services available from the Division of Exceptional Children in the State Department of Public Instruction (the agency titles vary from state to state) or from a regional educational service agency. It is disconcerting that often teachers believe no help is available when it really is. At the beginning of the school year, teachers are advised to check with their principal and central administrators to ascertain how to obtain the services of the special education consultant.

(f) Director of Special Education

Most school systems have either a part-time or full time director or coordinator of special education. This person is responsible for knowing about legal requirements and for administering, and often supervising, special education services. Classroom teachers who have specific questions about obtaining needed service, resources, or evaluation of a

handicapped student should consider working through their principal to contact the director of special education.

(g) Principals

Principals have been identified as one of the keys to mainstreaming success. Teachers should consider them as partners in carrying out mainstreaming responsibilities. They might be called on to arrange inservice training, consider hiring additional personnel, instigate a volunteer program to help with individualization, locate appropriate instructional resources, and/or work toward the reduction of the student-teacher ratio. Teachers should share their concerns about mainstreaming constructively with principals in order for principals to respond most effectively to teacher's needs.

(h) Counselors

Counselors have various roles to play in the implementation of mainstreaming. They often serve as chairperson of the evaluation team which is responsible for pinpointing educational problems and devising the individual education plan. They might help teachers with problems of social adjustment or coordinate parent involvement. Specific responsibilities vary from school to school, but the important thing for teachers to remember is that counselors share in the responsibility for mainstreaming.

(i) School Psychologists

Many schools employ a part-time or full time psychologist. Frequently, psychologists are similar to itinerant teachers in that they are responsible for serving more than one school. Psychologists typically assume major responsibility in evaluation and placement decisions, in addition to participating in the development of the individual education plan. Other mainstreaming involvement could be in working with teachers on behavior management and on ways to individualize instruction effectively.

(j) Librarians

Librarians can be of great assistance in curriculum adaptation, particularly in helping to identify textbooks and a large variety of supplementary materials appropriate to the student's achievement level and interests. Many handicapped students who read significantly below grade level need books of a high interest/low vocabulary nature. Librarians are uniquely qualified to identify such materials and to make them available to students and teachers. They can also be called upon to assist the teacher in gathering resource materials for units of instruction and concept development for students requiring more repetition and practice to acquire mastery than the majority of the class.

(k) Therapists

Mainstreaming requires the expertise of many specialists, such as those in speech, physical development, occupational development, dramatics, art, and music. All schools do not employ therapists in these areas on a full time basis; however, their services may often be available through mental health clinics, hospitals, special schools, colleges and universities, and state department consultants. When the teacher finds that the needs of individual handicapped students require the expertise of a therapist, the teacher, along with other team members, should seek the special help that is needed. Many handicapped students in regular classes have previous histories of working with therapists, particularly those in speech and physical development. Parents can provide this background information to teachers and might assist in arranging the continuation of services, as the need is documented in the individual education plan. Therapists can also train teachers in special techniques which the teacher can provide routinely in the regular class.

(l) Paraprofessionals

Paraprofessionals or teacher aides can contribute significantly to the quality and quantity of individualized instruction. Even if their help is available for only a portion of the school day or week, every bit of "extra hands" time can be helpful. When working with handicapped students, paraprofessional should be thoroughly aware of the individual education plan and the total educational program in which the student is included (resource program). Teachers are wise to provide careful guidance to the paraprofessional to capitalize on generalization from one portion of the curriculum to the other.

(m) Students

Students, both handicapped and nonhandicapped, have a significant role to play in successful mainstreaming. Handicapped students should be involved in the development of their individual education plan when this is appropriate to their age and maturity. They should be encouraged to share their perspectives on their social acceptance in the regular class. Problems can often be pinpointed and eliminated when students bring them to the attention of teachers in early stages before they reach a crisis point. Handicapped students often know how to adapt the curriculum or school environment to their needs most effectively. Sometimes, teachers waste time by trying to second guess, for example, the needs of a blind student. Asking the student directly about when help is needed and when it is not needed can assist teachers in getting on with the task of appropriate instruction. Mainstreaming should be viewed not as an arrangement to be imposed on handicapped students, but rather as a process involving reciprocal information sharing and responsibility.

(n) Parents

Parents can be tremendous partners to teachers in mainstreaming programs. There are many ways in which parents can enhance the success of handicapped students at school. First, they have a significant responsibility as members of the team developing the individual education plan. As they participate in specifying priority instructional goals, they help shape the curriculum through which their children will progress. Educational decision making and accountability, therefore, becomes a shared responsibility with parents. Other participatory involvement of parents might be in serving in the role of a teacher aide in their child's class or in another class in the school; sharing information on helpful hints regarding possible classroom/environmental adaptions or motivational suggestions; making instruction materials to be used at school; reviewing and reinforcing concepts taught at school in the evenings; and helping to foster their child's social adjustment.

(o) Community Volunteers

Volunteers from the community have made beneficial contributions to mainstreaming in some school systems by serving, in a way similar to that described for parents, in the role of teacher aide. They might work individually or in small groups with handicapped students needing extra help or might be involved in projects or assignments with other class members in order to free teachers to spend more time with students having special problems. Some communities have organized volunteer efforts for the purpose of making instructional materials needed by handicapped students or raising money to purchase expensive equipment, such as auditory trainers for hearing-impaired students, wheelchairs, large-print typewriters, or braille readers. Civic groups and service clubs in many communities have a particular interest in the needs of handicapped persons. One of the best examples of this interest on national basis is the Lions Club, an organization that has made a tremendous contribution to services for the blind. Generally speaking, communities are rich in possibilities for volunteer help. Often the failure to capitalize on volunteer contributions may be traced to the fact that there is no single person in the school system charged with the responsibility of recruiting, training, and matching the needs of teachers/students with the willingness and capability of volunteers to be involved in educational programs. Teachers are encouraged to consider the possibility of seeking help for mainstreaming from interested community citizens.

(Turnbull and Schulz, 1979, pp. 66-72)

Mainstreaming requires shared responsibility which involves many team members working cooperatively with classroom teachers to provide quality education programs for handicapped students. It should be emphasized that mainstreaming shows the need to carefully coordinate all activities and resources to maximize the benefit to the students involved.

Individualized Education Programs

Historically, the major function of special education has been to provide handicapped students with individualized instruction tailored to meet their unique needs (Larsen and Poplin, 1980, p. 11). This statement embodies the essence of the Education for All Handicapped Children Act of 1975 (P.L. 94-142), and one of the major purposes of this Act is to develop for each handicapped student an Individualized Education Program or I.E.P.

In the past, many educators who have worked with handicapped students have, in one form or another, utilized individual instruction techniques. With the advent of P.L. 94-142, a specific procedural form called the Individual Educational Program is provided which educators and support personnel may follow to insure a well planned and executed educational experience for handicapped students.

In an attempt to coordinate all instructional efforts, the follow- has been stated:

> Public Law 94-142 proposes a comprehensive structure to use in developing and delivering individualized instruction to handicapped children and youth regardless of the particular model or method to be used. This systematic structure or format has been established in law by mandating that individualized education programs (IEP's) be written for each student who receives special education services. The individual education program is defined as a document written by a team of professionals and

> parents that specifically delineates the content and procedures by which to provide the handicapped student an appropriate instructional intervention. As with any new federal legislation, an agency of the U.S. government is assigned the task of developing guidelines or regulations that specifically define the intent of that particular law. The Bureau of Education for the Handicapped (BEH) through the U.S. Office of Education of the Department of Health, Education and Welfare is the agency responsible for implementing P.L. 94-142 and has "operationalized" the law in a series of federal regulations. The regulations include the specification of procedures and content required in developing, implementing, and maintaining each program. The mandated general procedures established by BEH include state agency responsibilities, effective dates, descriptions of IEP meetings, participants of the meetings, and provisions for parent participation. (Larsen and Poplin, 1980, pp. 11-12)

Of great importance in both the law and the regulations which govern the development of individual education programs is the specification of the contents to be included in each student's program. These mandated components are as follows:

(a) Statements indicating the student's present levels of educational performance.

(b) Statements of annual goals.

(c) Short-term instructional objectives.

(d) Specific educational services to be provided to the student.

(e) The extent to which the student will participate in the regular educational program.

(f) The dates for initiation and projected duration of services.

(g) Objective criteria, procedures, and schedules for evaluations the extent to which sort-term instructional objectives are being met.

Upon reviewing the preceding list of components, teachers may feel that the task is overwhelming. If, however, consideration is given to the primary purpose of individualized educational planning for the handicapped, the components are realistic. It must be kept in mind that, in educating the individual handicapped child, the appropriateness of his/her educational program is essential to appropriate instruc-

tion. Consequently, effective I.E.P. development must be given the utmost professional care and consideration. It should be remembered that the development, delivery, and evaluation of the I.E.P. is a team effort for a number of individuals involved in the education of the handicapped student. Also of importance is the additional planning and conference time needed to carry out all I.E.P. procedures. These tasks will be conducted by the school district's Special-Needs Placement Committee.

The Placement Committee

The placement committee functions as an interdisciplinary team which insures that all I.E.P. services are carried out. The National Association of State Directors of Special Education outlined the functions of the placement committee in the following manner:

(a) Preplanning functions
    (1) Specifying committee composition and procedures.
    (2) Gathering information needed to make decisions.
(b) Planning functions
    (1) Developing an individual education plan.
    (2) Determine eligibility for special education placement.
(c) Implementation functions
    (1) Providing for individual program implementation.
    (2) Providing for individual program monitoring and evaluation.

(Turnbull and Schulz, 1979, pp. 76-77)

Composition of the Committee. The regulations of P.L. 94-142 specify who will comprise the committee involved in developing the Individual Education Program and they are as follows:

(a) A representative of the local educational agency or intermediate educational unit who is qualified to provide the supervision of special education,

(b) The teacher or teachers of the student,

(c) The parents or guardians, and

(d) When appropriate, the student.

(Public Law 94-142, 1976)

When necessary, other specialists may be called upon for evaluative information such as medical or psychological specialists and legal advisors.

I.E.P. Component Review

Level of Educational Performance. An essential part of the I.E.P. process is continuous assessment or evaluation. There are a number of steps that provide the framework for making decisions about each student's current level of educational performance. For the handicapped child, a multidisciplinary evaluation team is responsible for administering the necessary and appropriate psychological, social and educational measures. The types of evaluation required for each student will differ according to the type and severity of the individual handicap and will be determined by the placement committee.

Annual or Long-Term Goals. One of the primary requirements for individualizing instruction is the determination of long-term goals. The National Association of State Directors of Special Education suggests critical areas to consider when deciding where to begin in the establishment of long-term goals:

(a) What are the priority parental concerns?

(b) What are the priority teacher concerns?

(c) What are the appropriate developmental sequences of tasks or behaviors that the child would be expected to move through?

(d) What behaviors appear to be the most modifiable, as determined from baseline assessment data including the student's strengths, weaknesses, and learning style?

(e) Are there any other crucial considerations one needs to make in selecting areas of educational need, such as any problem areas that are truly dangerous for the child, injurious to his/her health, or others?

(National Association of State Directors of Special Education, 1976, p. 32)

Short-Term Objectives. Within the structure of determined instructional goals, teachers usually have some freedom in specifying instructional objectives. Curriculum areas are usually defined by the state or local district and imply that certain instructional objectives will be achieved during a certain grade level or within a course framework. Teachers may select or formulate instructional objectives which the handicapped student is expected to achieve. It may be noted that these objectives are expected to fall within the general framework as those expected by nonhandicapped students in the same class.

A key to the selection and development of specific instructional objectives is the process of task analysis. Although the topic of task analysis will be explained in another chapter of this handbook, briefly, task analysis is the process of breaking down a course or range of skills/knowledge into great detail in order to carefully examine all that a student is required to learn or do.

Specific Educational Services

The I.E.P. must include statements that specify special services necessary to accomplish the goals and objectives identified for each student. Specification of these services is required without regard to the local availability of those services. This task may be difficult if the needed services do not exist within the local district. Such

services include speech therapy, physical therapy, special transportation, counseling, and other psychological services.

Time Allotment

The extent to which the handicapped student will participate in the regular classroom program must be defined. The nature and severity of the student's handicapping condition will determine whether the student will receive direct services from a special educator or indirect services through consultation with the classroom teacher.

Setting Time-Lines or Dates

When developing the I.E.P., it is necessary to establish time parameters for when services to the handicapped student will begin and when they are projected to end. As soon as the student has been evaluated for special services, the placement committee and the classroom teacher should develop a calendar of events aligned with the I.E.P. goals and objectives.

Also to be set are dates when the student's progress will be reviewed in terms of accomplishing long- and short-term goals and objectives. A review of the I.E.P. at regularly established intervals will help the classroom teacher determine whether or not changes in the I.E.P. are necessary.

I.E.P. Evaluation

The use of the I.E.P. program simplifies the process of evaluation. It also simplifies the reporting procedure since teachers, administrators, parents, and the handicapped student can examine the program in terms of the student's progress and know where the student began the academic program, what was accomplished, and how progress was made.

The effectiveness of the program for each student is determined by the accomplishment of the goals and objectives outlined for that individual. If objectives have been stated in measurable terms, the criteria for evaluation will have been set. The evaluation procedures should determine the following:

(a) If satisfactory progress toward the annual goals is being achieved.

(b) If the annual goals or short-term instructional objectives need revision.

(c) If services need to be altered.

(d) If the student can benefit from a less restrictive environment.

(National Association of State Directors of Special Education, 1976, p. 32)

Educators who have successfully utilized individual instruction techniques realize the benefit to the student's learning process. A parallel benefit of the federal mandate requiring the development of an I.E.P. for each handicapped student may be a positive change in the learning environment for all students.

The I.E.P. Process--A Review of the System

With the major components and responsibilities of the I.E.P. process having been reviewed, it is now possible to present the process in a list of steps that should be accomplished. This listing will state what is to be completed followed by a notation of individuals, other than the handicapped student, who will be involved at that point.

(a) Referral of student to special education program for special services. Personnel: Special Education director, district administrator, parents.

(b) Development of the Student Mainstreaming Team. Personnel: Administrators, Special Education personnel, parents, classroom teachers, support specialists.

(c) Assessment of handicapping condition and level of educational progress. Personnel: Assessment specialists, Special Education teachers, parents, psychological and medical support personnel.

(d) Review of student abilities and limitations coordinated with available school resources. Development of academic and supportive services program. Setting of long- and short-range educational goals and instructional objectives. Personnel: Parents, Special Education administrator and teachers, regular teachers, evaluative personnel.

(e) Student placement and instruction program deliver. Personnel: Resource room teacher, regular classroom teacher, special services personnel.

(f) Periodic student evaluation; achievement of goals and objectives. Personnel: Classroom teacher, resource room teacher, parents, Special Education director.

(g) Continual instructional delivery.

(h) End-of-term evaluation--completed to determine if instructional goals and objectives have been attained. Personnel: Resource room teacher, regular classroom teacher, parents, support services personnel, Special Education administration.

(i) Formulation of continuing I.E.P., including a base line evaluation of past levels of performance. All personnel.

The I.E.P. process is a continuing one. Due to the individualized nature of the instructional plan, evaluation and alteration of expected goal and objective outcome may be conducted on a continuous basis.

Summary

Many parents, teachers, and other school personnel have been confused about the intent and composition of the mainstreaming process. While many important considerations are necessary and sometimes time-consuming, the overall benefit to handicapped, as well as nonhandicapped students, may be great.

CHAPTER VI

THE PROCESS OF DEVELOPING INSTRUCTION

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Introduction

The process of developing specific instruction to be presented to the special-needs student in the classroom should be a cooperative one. All members of the Individualized Education Program (IEP) team should provide input for instructional development. This group should include teachers, parents, administrators, consultants, and the students themselves. There are several factors which contribute to the success of a cooperative instructional development approach.

> Why a cooperative approach? Program development involves not only the stating, finding, or identifying of new content but also new ways of using old content, new teaching strategies, and new teaching techniques. Program development is an educational process. Broad participation in program development involves more people in the educational process; therefore, more people learn and grow as individuals. This is one of the objectives of program development for special vocational needs youth. Participation in such activities tends to generate a kind of psychological ownership of the resulting program. The persons included become involved and share responsibility for the resulting program. This involvement encourages individuals to become committed to the program and enables them to work for its success. In order to achieve successful program development, broad-based cooperation is essential.
>
> (Meers, 1980, p. 118)

Another reason for including various individuals in the program development is that such a group will increase information available for the process. Each of the team members will have something different to contribute to the development of the program and will view the special-needs student from a different perspective.

The process of developing appropriate instruction for special-needs learners does not need to be a lengthy or complicated one, but

careful attention should be paid to several important aspects. Special educator George Fair outlines the following:

(a) Development of goals,

(b) Selection instructional objectives,

(c) Selection and organization of content,

(d) Selection of instructional procedures, and

(e) Evaluation of achievement.

(Meers, 1980, p. 121)

From a classroom teacher's point of view, these steps should be included in the planning of instruction for all students, not just special-needs learners. The major difference in developing instruction for special-needs learners is that it is planned for one individual with specific characteristics which may be handicapping or limiting in nature.

Defining Education

Until recent years the educational program offered in public schools has been primarily concerned with training the normal student within a somewhat limited range of instructional areas. "The definition of education upon which most public schools have operated, and still do to a great extent, has been extremely limited." (Larsen and Poplin, 1980, p. 101) Characteristically, the primary goal of education has been to prepare students to enter more formalized education programs such as colleges and universities. This narrow concept of education has been criticized for focusing on the educational needs of relatively few students. It is not surprising, then, that in recent years public education has seen the development of a number of innovative concepts geared toward expanding the range of educational offer-

ings. These new programs have emphasized science education, vocational and career education, and literature and writing programs. However, even these programs have been directed primarily toward the normal school population. Few of the programs have been directed to or have included students with special needs, the handicapped child.

With the development of legal mandates, great changes have occurred in traditional academic curricular offerings. The traditional definition of education no longer fits the broad scope of instructional activities found in schools. Historically, handicapped children have been divided into two distinct categories: those students considered educable and those considered ineducable. This division of handicapped children was primarily used for purposes like the following:

> ...Excluding supposedly ineducable children from receiving educational opportunities. In several major court cases in the late 60's and early 70's, this categorization for the purpose of exclusion was ruled by U.S. federal courts as a violation of the civil rights of handicapped persons.(PARC vs. Penn., 1971). In essence, court rulings and recent legislation indicate that, indeed, no child is ineducable. These court cases represent major landmarks in the field of special education and hold great implications for all education in general. Together, these judicial decisions and the passage of P.L. 94-142 in 1975 unquestionably call for a broad-based reconceptualization of education in order to include the handicapped.
>
> (Larsen and Poplin, 1980, p. 102)

Education may be defined as the process of growth or development that results from instruction. In regard to schools, instruction is provided for students in various instructional settings. Therefore, public school education is training an individual student to participate in all aspects of daily living. The overall goal of education is to allow individuals to develop to their fullest potential in all areas of life.

Upon examining the areas of education and development related to

educating the handicapped student, it is possible to categorize the major components of special education into four major areas:

(a) Self-help and basic living education,

(b) Career and vocational education,

(c) Academic education, and

(d) Social-behavioral education.

(Larsen and Poplin, 1980, p. 103)

When school personnel embark on the I.E.P. development task, it is imperative to address these four major educational component areas.

In reality, the operational posture of general education programs in public school has changed. Now included are developmental education programs specifically designed for special student groups, notably the handicapped. Educational opportunities developed to provide appropriate educational opportunity for special needs will continue to be an integral part of the overall school curricula.

Defining Areas of Special Education

When considering the areas of special education noted in the previous section, it is important to note that these areas of educational performance are not categorized according to specific handicapping conditions. When planning for the handicapped student, it is important to view the specific educational needs of the handicapped child rather than to strictly focus on the disability. Once it has been determined what the educational needs are, then the handicapping condition may be viewed in light of what special considerations must be made to achieve appropriate educational performance in that area of need.

Educational achievement or performance criteria in the specific areas of need should be set. This will be followed by a thorough eval-

uation of the handicapped individual's characteristics, abilities, disabilities, education and performance level. Only at this point should there be a decision made as to what special services be provided in order to enable the handicapped student to achieve the prescribed educational objectives.

The key factor is to gather pertinent sequential information in order to prescribe appropriate instruction and support services to facilitate functionally oriented experiences. This permits planning to deal with viable educational opportunity and directs individuals away from spending time and energy in deficit activities. Deficit activities are defined as those activities which spend instructional time and effort in areas where little or no progress will logically be realized.

There are a number of special education activity categories which are considered to be productive and which lend themselves to the development of a well rounded special education program for any school district.

Self-Help and Basic Living Skills. Self-help and basic living skills are those daily activities which allow a person to function as independently as possible in the home or residential setting. These are skills which begin with early infant training and continue through to adulthood with the hope that each individual will develop a level of daily self-sufficiency. These skills, while not directly associated with any particular educational discipline, must be present for an individual student to properly cope in the educational environment.

In many cases, self-help or independent living skills are associated only with the severely handicapped. Considerations in this area are necessary no matter what the level or nature of the handicapping

condition.

As in other aspects of special education, there is a vast amount of curricular material which deals with the area of basic living skills. This information may be provided to the I.E.P. team as needed. In most I.E.P. programs, self-help and basic living skill information is part of each day's learning activity.

Career and Vocational Education. The area of career and vocational education includes skills and knowledge necessary for the handicapped individual to select and maintain an appropriate position of employment. As noted by Larsen and Poplin:

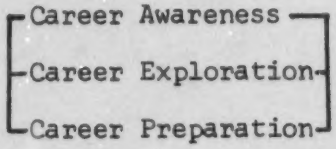
> Appropriate employment can be defined as holding a job for which one has or can obtain the necessary skills and for which one is sufficiently reinforced, that is, job match and job satisfaction.
>
> (Larsen and Poplin, 1980, p. 114)

It should be noted that the preceding definition applies, in a strict sense, to primary vocational education programs. It must be realized that some latitude in the use of this definition must be given to programs that are conducted in mostly secondary school settings. Those skills necessary to examine and select appropriate job category areas are generally considered within the framework of career education, while on-the-job skills are strictly vocationally educational in nature.

Both the areas of career and vocational education are primary to the education of handicapped individuals. Only when the handicapped person is able to secure and hold a position of employment will he be self-sufficient. While it is not realistic to assume or even hope that all handicapped individuals may become self-sufficient, one can allude to the fact that those handicapped individuals who are capable of appropriate placement in the regular classroom setting are hopeful candidates.

The interfacing of handicapped individuals with career and vocational education opportunities may take place in the same fashion that nonhandicapped students take advantage of these opportunities. It should again be emphasized that the handicapped students under consideration in this context are those deemed capable of benefiting from regular, or slightly modified, appropriate instruction in the regular classroom.

It is appropriate at this point to state that the handicapped child should be able to benefit from a well-defined career education program which will lead to definite vocational skill training. At various developmented points and grade levels, the handicapped individual should be able to work through the career education spectrum shown below:



(Phelps and Lutz, 1978, p. 32)

> Included in the career preparation stage are the preliminary professional evaluations that need to be made for placement of the handicapped individual into an appropriate vocational education setting.

It should be noted also that it may be discovered that not all handicapped individuals will be able to succeed in regular vocational education programs. When this occurs, special arrangements should be made for appropriate training opportunities.

Sociobehavioral Education. As was noted by Larsen in the following excerpt:

> Sociobehavioral education can be defined as instruction designed to develop student self-esteem and confidence through the acquisition of appropriate social behaviors. The ultimate goal of sociobehavioral education is to allow the handicapped student

> the freedom and independence afforded other individuals in society.
>
> (Larsen and Poplin, 1980, p. 126)

It is recognized that social freedom is given only to those individuals who are able to exhibit social behavior which is acceptable in today's society. In order to achieve an understanding of what appropriate social behavior is between the teacher and the handicapped student, the following activities are suggested:

(a) Development of a classification system for common behavior problems in the classroom.

(b) The developmental sequencing of educational goals as they relate to acquiring acceptable behaviors.

(c) A development of social curriculum for use specifically with handicapped students.

(d) A discussion of the concept of normalization of handicapped persons in society.

(e) A discussion of values education.

(Larsen and Poplin, 1980, p. 126)

To a very large extent, the success of handicapped students in all areas of educational endeavor will be dependent upon their social behaviors.

Academic Education. The area of academic education for the handicapped is a very diverse one. On one hand, there are the students who by virtue of their handicap are only physically disabled and, thereby, capable of progressing through regular academic instruction at a normal rate. Conversely, there are those students with learning difficulties or a degree of retardation for whom academic progress is extremely difficult. Students who fall into the second group are those for whom special academic considerations must be made in the I.E.P. process.

For purposes of special academic instruction the following guidelines are presented:

> One can define academics as training in the basic concepts of oral language, reading, writing, and math. These subdivisions are used to fulfill the purpose of special education which is to assist only those students who are classified as handicapped and who exhibit problems to the degree that they cannot be educated successfully in the regular classroom. Therefore, any student for whom academic education is needed through special education must first be instructed in the basic skills necessary to matriculate into society and school. Attention to auxiliary academic areas is in most instances a waste of the student's time. Instruction in more advanced areas can and should be provided to those intellectually and emotionally capable handicapped students through the regular classroom.
>
> (Larsen and Poplin, 1980, pp. 133-140)

As noted the academic education of the handicapped student is an individual one and must be given careful consideration on a case-by-case basis.

Task Analysis

Once the handicapped student has been identified and referral for special education has been made, the work of the Individualized Education Program (I.E.P.) team begins. As the I.E.P. process identifies areas of appropriate education as well as special services needed, each individual subject area specialist must make decisions on what to teach in each situation. The topic of what to teach may then be analyzed to determine the suitability for a given student and his/her handicapping condition. An excellent means of accomplishing this is through curriculum task analysis. The process of task analysis is certainly not new to most vocational educators and therefore should be easily implemented.

To help clarify what task analysis is, the following definition is offered:

> Task analysis focuses on the identification and verification of tasks performed by workers in a certain occupation or

> cluster of occupations. Its procedures enable this strategy to produce objective data relative to worker tasks.
>
> (Finch and Grunkiltan, 1979, p. 110)

Tasks analysis, then, is the process of identifying and verifying tasks or job skills which are taught in a particular vocational curriculum. Vocational education course breakdown is based on an analysis of what is done in a particular job category in a step-by-step fashion.

The field of vocational curriculum development views specific jobs and the respective duties performed by the individual as broad categories within which individual tasks are performed. Tasks are units of work or skill performances that collectively enable an individual to complete certain work responsibilities. Each task has a definite beginning and ending point with several identifiable steps.

Most vocational education programs have outlined their individual courses based on a collection of commonly related tasks. In viewing the educational program for the handicapped students, a process of selecting appropriate tasks, their level of difficulty and sequence for instruction may be completed. Each vocational area will have a variety of tasks, some of which may be taught in the vocational classroom alone, while others will need instructional support from other instructors such as the resource room teacher.

Levels of Educational Performance

As it is recognized that each handicapped student must have an education program (I.E.P.) developed for their particular needs, it is also necessary to individually ascertain levels of performance. This is a difficult area to address in a universal fashion due to the vast differences in instructional programs and handicapping conditions.

The beginning of this process is the evaluation of "what constitutes the categories of self-help/basic living, academic, career/vocational and sociobehavioral education, the I.E.P. team can begin to select appropriate performance areas and constructs pertinent to the individual child" (Larsen and Poplin, 1980, p. 181). The determination of the areas of special education upon which to build a particular student's education. Additionally, determining educational performance levels in all academic areas by the use of various evaluation measurements is necessary to determine a child's present level of educational performance. When these determinations have been made, it then becomes possible to establish where the student is and where he/she can be educationally taken. It is then a much easier task to define what the long- and short-term educational goals should be for any given individual:

> This documentation is very similar to that used to select required annual goals except that in most instances establishing appropriate educational areas provide an ultimate goal or goals for the child's education. This, in turn, also provides a cohesive structure for long-range educational planning, the selected area of educational performance is subject to review and revision as necessary.
>
> (Larsen and Poplin, 1980, p. 191)

There are several factors to consider when establishing appropriate educational performance areas for each student:

(a) The referral and screening data,

(b) The evaluation for diagnosis and placement,

(c) The age of the student,

(d) The severity of the handicap,

(e) The unique restrictions placed upon a particular student due to his/her handicapping condition,

(f) The environment where the child is presently expected to

function,

(g) The least restrictive educational environment, and

(h) Parent and child expectations.

(Larsen and Poplin, 1980, p. 191)

It is helpful and necessary to give each of the aforementioned categories attention when selecting those areas of educational performance most appropriate for each student. Categorized information relating to each individual student leads directly to determining the types of additional assessments that may be required to document present levels of functioning.

The establishment of a sutdent's beginning level of educational performance is a mandated component of the I.E.P. process and serves to establish a child's entry level of education and performance. The two major purposes to be served by this process are (1) program entry and planning, and (2) program evaluations.

Annual Goals and General Objectives

Perhaps more than any other group of statements within the I.E.P. document, the establishment of annual goals and general objectives determines the success of the handicapped child's education. The degree to which the I.E.P. team (1) selects appropriate and comprehensive goals and (2) identifies all skills necessary to achieve those goals or general objectives greatly influences the effectiveness of the individualized education program. The establishment of long-term goals and objectives enables educators to effectively conceptualize the overall I.E.P. Additionally, goals and general objectives lead directly to establishing short-term instructional objectives that define weekly or daily instruction.

Annual Goals. The second I.E.P. component which is mandated is the determination of annual goals. Annual goals comprise those goals which are appropriate for the handicapped student's immediate education and may be projected to be accomplished within the current school year. These goals represent projections and are not to be considered legal or binding. They are also to represent that which may be educationally possible with the provision of special education and related special services. The establishment of annual goals serves to direct and coordinate all educational activities that will subsequently be developed under their framework. Annual goals also provide some general measures of educational performance or criteria to be achieved by an individual student.

General Objectives. After performance areas of special education have been selected and annual goals in each of the instructional areas have been developed, the general objective pertaining to each annual goal should be defined. This step is not mandated by law, but provides an intermediate step between annual goals and short-term or daily instructional objectives. General objective development begins the narrowing-down planning process for the selection of short-term instruction.

In order that annual goals, general objectives, and short-term objectives may be conceptualized for planning clarity, the rise of curricular maps is often used. Curricular maps are overall sequential listings which contain all the general objectives for long-range goal attainment. They may be a valuable instructional planning tool in the visualizing of where a student's level of performance is and the step-by-step process of improvement.

Summary

Much of what remains in the instructional planning process for the handicapped child is the same as would be included in the planning process for nonhandicapped students. Interestingly enough, the planning processes are not that different in purpose, form or content, the exception being the considerations given to handicapping conditions and special services needed to accommodate for those special handicapping conditions.

CHAPTER VII

A PLANNING MODEL FOR EDUCATING THE HANDICAPPED

CHAPTER VII

A PLANNING MODEL FOR EDUCATING THE HANDICAPPED

Introduction

There are a number of procedural steps which need to be accomplished when integrating, or mainstreaming, the handicapped student into the regular school classroom. These steps, or requirements, are often viewed by many teachers, parents, administrators, and other school personnel as being an extremely large burden upon their time and effort and the overall resources of the school district. Thus, the process of mainstreaming is faced with overcoming attitudinal barriers. There is no denial of the fact that accommodating handicapped students does take a considerable amount of time and energy, as well as supportive financial resources. Additionally, many school personnel resent the fact that the mainstreaming process on the local school level is federally mandated, even though local districts generally wish to assist the handicapped student.

The overall purpose of this text is to provide educational personnel with tools for mainstreaming. This chapter will present a planning system, or model, that will permit the utilization of many types of information about the handicapped needed for effective mainstreaming.

While many educational planning models take on an air of extreme complexity, this proposed model is very simple in construction. This planning model may also be adapted to any size school district and contains provisions for all of the components mandated in the Individualized Education Program (IEP) planning process.

Educating the Handicapped Student in the Regular Classroom

A Planning Model. It is recommended that local education agencies, under the guidance of the Montana Office of the Superintendent of Public Instruction's Office of Special Vocational Needs, make a concerted effort toward the planning for and the accommodation of the handicapped or special-needs learner into the regular vocational classroom. This is suggested not only for specific vocational education programs but for prevocational or vocationally oriented programs as well.

The following program planning model may be utilized as a key component in that planning and accommodation, or mainstreaming. This IEP program planning model is graphically represented as a cube matrix. It may be noted that this planning model is uniquely adaptable for use with one handicapped individual when considering specific problems pertaining to that one student or it may be utilized to plan the mainstreaming process for an entire school or district.

Because graphic representation enables the visualization of interrelationships among basic components and subcomponents of planning information, this cube matrix is comprised of three axes: x, y, and z (see Figure 1).

x axis — Handicapping Conditions. Due to the vast amount of information available for many of the handicapping conditions of the physically, mentally, and multiply handicapped student, this category will contain the greatest amount of information.

y axis — Educational Methodology and Practice. As with any specialized group, certain accepted educational practices are utilized for maximum effectiveness. Again, to a very large extent specific educational practices will vary with the handicapping conditions, severity, and educational level of students.

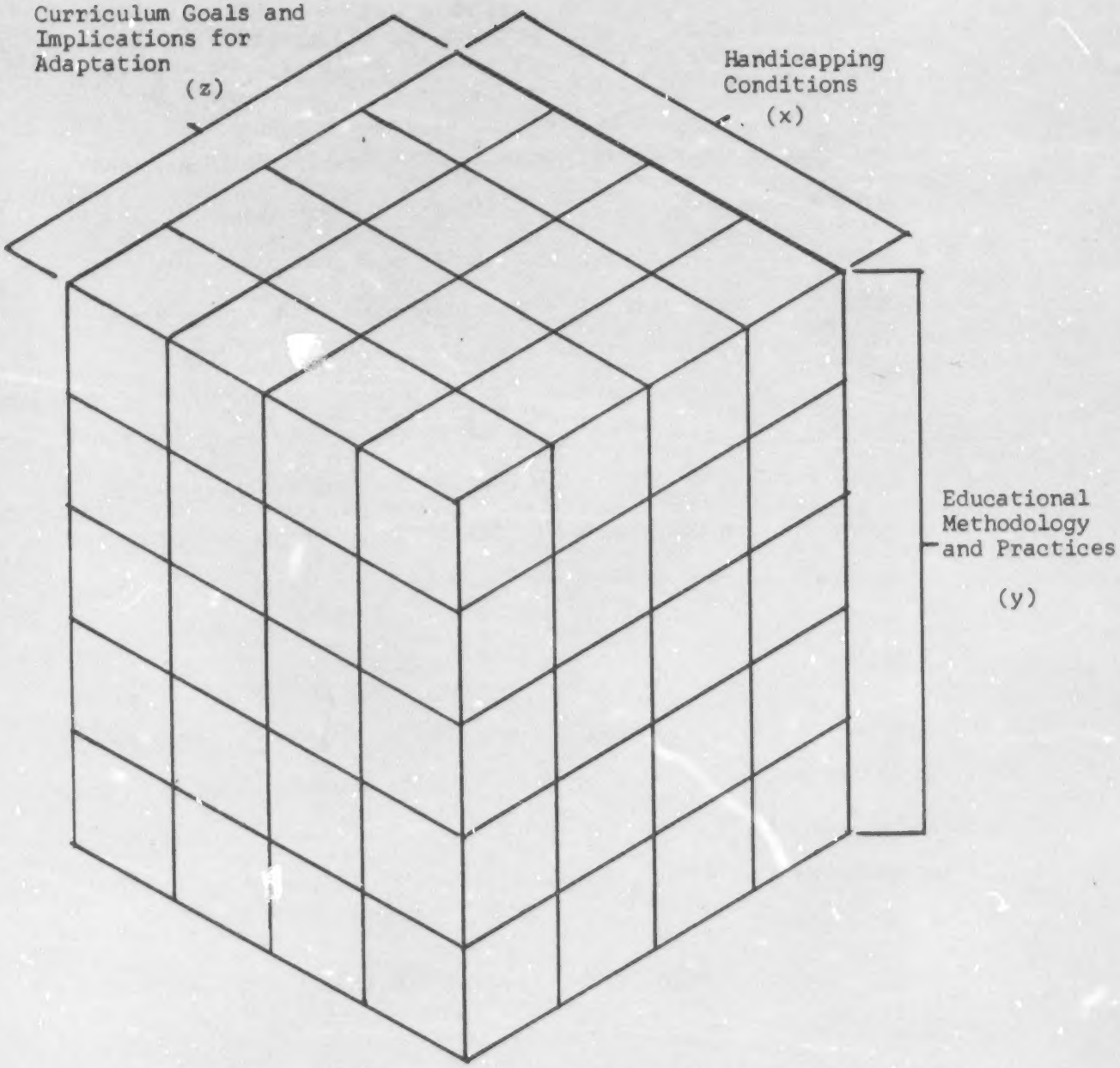


Figure 1

A Planning Model

Educating the Handicapped Student in the
Regular Classroom

z axis — Curriculum Goals and Specific Implications for Adaptation. Input to this category comes from the local district, individual educational discipline, and case study. The IEP team makes decisions on district or individual curriculum goals for placement which are then placed along this axis to be interfaced with other information categories.

The combination of interfacing interrelationships developed from this planning system would facilitate immediate information retrieval for the formulation of realistic operational planning for a total school district of the Individual Education Program for one particular student.

Computer Adaptation of the Planning Model

With the development and common availability of small computers, microcomputers and minicomputers, for school district and even classroom usage, special-needs educational planners have an invaluable tool available.

Micro- and minicomputers lend themselves very easily to the retrieval of any one or combination of programs for planning factors presented in this planning model. In addition, individual student characteristics could be analyzed and categories of appropriate planning information selected by the computer. The computerization of this planning procedure would be of great aid in reducing complexity and time needed to plan detailed educational information for a specialized target population.

It is strongly urged that local school districts explore the use of computer technology for the purpose of educational planning for the handicapped students. The cost benefit of computer use over the complete planning of these activities by individual school personnel is

significant. The additional benefit is that, along with student program planning, the classroom computer is well suited for individual student record keeping and a vast array of instructional purposes as well.

There are other planning processes available which also may bring together the information and considerations necessary for effective educational program construction for the handicapped or special-needs individual. Any program planning will require the considered input from trained professionals. The utilization of the small computer, however, streamlines and greatly economizes time, effort, and financial resources. The additional dimension is that, if properly programmed, all possible bits of information pertaining to a combination of handicaps and/or curriculum consideration are retrievable and may be presented by the computers, therefore reducing the chance of improperly developed programs due to forgotten information.

Summary

Planning educational programs for the handicapped may be a time-consuming, complicated process. The use of an educational planning model which brings together the many complex facets of handicapping conditions, methodology, goals and objectives is a great aid. To increase the utilization of such a planning process, the educational computer may be utilized for planning efficiency.

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and

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Helena, Montana
1981

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SPECIAL-NEEDS EDUCATION MATERIAL

FOR

VOCATIONAL AND INDUSTRIAL EDUCATION:

A BIBLIOGRAPHY

Developed as a Resource Guide for

ASSISTING THE PHYSICALLY HANDICAPPED:

AN IDENTIFICATION AND DEVELOPMENT

OF APPARATUS FOR LABORATORY SHOPS

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Montana State Office of Public Instruction
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1981

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The findings in this report are the results of a research project sponsored by federal funds administered by the Office of Public Instruction of Montana. Grantees undertaking such projects are encouraged to express freely their professional judgement. Statements in the report do not, therefore, represent official OPI position or policy.

ACKNOWLEDGEMENTS

I greatly appreciate the support given to the continuing vocational special-needs project:

Assisting the Physically Handicapped:
An Identification and Development
of Apparatus for Laboratory Shops

by the Office of Public Instruction of the State of Montana, Helena, and, in particular, to the Vocational Special-Needs Department of that office. Support by this agency has made this effort possible.

Heartfelt thanks is extended to Susan J. Pollington whose expertise as an academic research assistant has aided greatly with this project.

Additional thanks is given to the Department of Agricultural and Industrial Education, Montana State University, and, in particular, to Dr. Max Amberson, Chairman, for continued supportive service and encouragement.

Kenneth L. Bruwelheide, Ed.D.

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PREFACE

The purpose of this bibliography is to present references pertinent to Special-Needs--Mainstreaming topics. In particular, this listing reflects the effects of Public Law 94-142 upon the various disciplines of vocational education and related topics by presenting material published since the law's passage in 1975. Selected earlier references were included when determined to be of particular value.

Resources examined include:

Applied Science and Technology Index
Business Periodicals Index
Current Index to Journals in Education
Dissertation Abstracts International
Education Index
Monthly Catalog to United States Government Publications
Monthly Checklist of State Publications
Public Affairs Information Service
Reader's Guide to Periodical Literature
Resources in Education, including an ERIC database search
Resources in Vocational Education
Social Sciences Index
State Education Journal Index
Subject Guide to Books in Print

This bibliography is compiled in an effort to assemble as many sources and references related to mainstreaming as possible; it should not be considered complete or comprehensive. Citations have not been sustematically evaluated, and no implications regarding quality of materials should be drawn.

Since the first edition of this bibliography was compiled in May of 1980, there has been an explosion of printed material on the subject of mainstreaming of handicapped children. Thus, the above resources have again been searched and the findings have been incorporated to form this second edition.

USER'S INSTRUCTIONS

The bibliography is divided into several topical divisions, including:

- Mainstreaming--General Information
- Legislation and Legal Responsibility
- Physical Handicaps and Mainstreaming
- Mental Disorders and Mairstreaming
- Adaptive Processes for Mainstreaming
- Attitudes
- Vocational Education and Rehabilitation Programs
- Adaptive Equipment, Materials and Facilities
- Teacher Preparation--Inservice and Preservice
- Program Models for Mainstreaming
- Administration of Special-Needs Programs--Local Education Agency
- Approaches to Various Disciplines
  - Physical Education
  - Business Education
  - Industrial Education
  - Agricultural Education
  - Home Economics

This organization was implemented to facilitate users' searches for references pertaining to a particular category of information concerning Special-Needs or Mainstreaming in Education.

Locations before the main bibliography, the user will find an index arranged consecutively by section and, within each section, alphabetically by author or first word of title. Each entry lists the year of publication and the bibliography page it may be found upon.

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